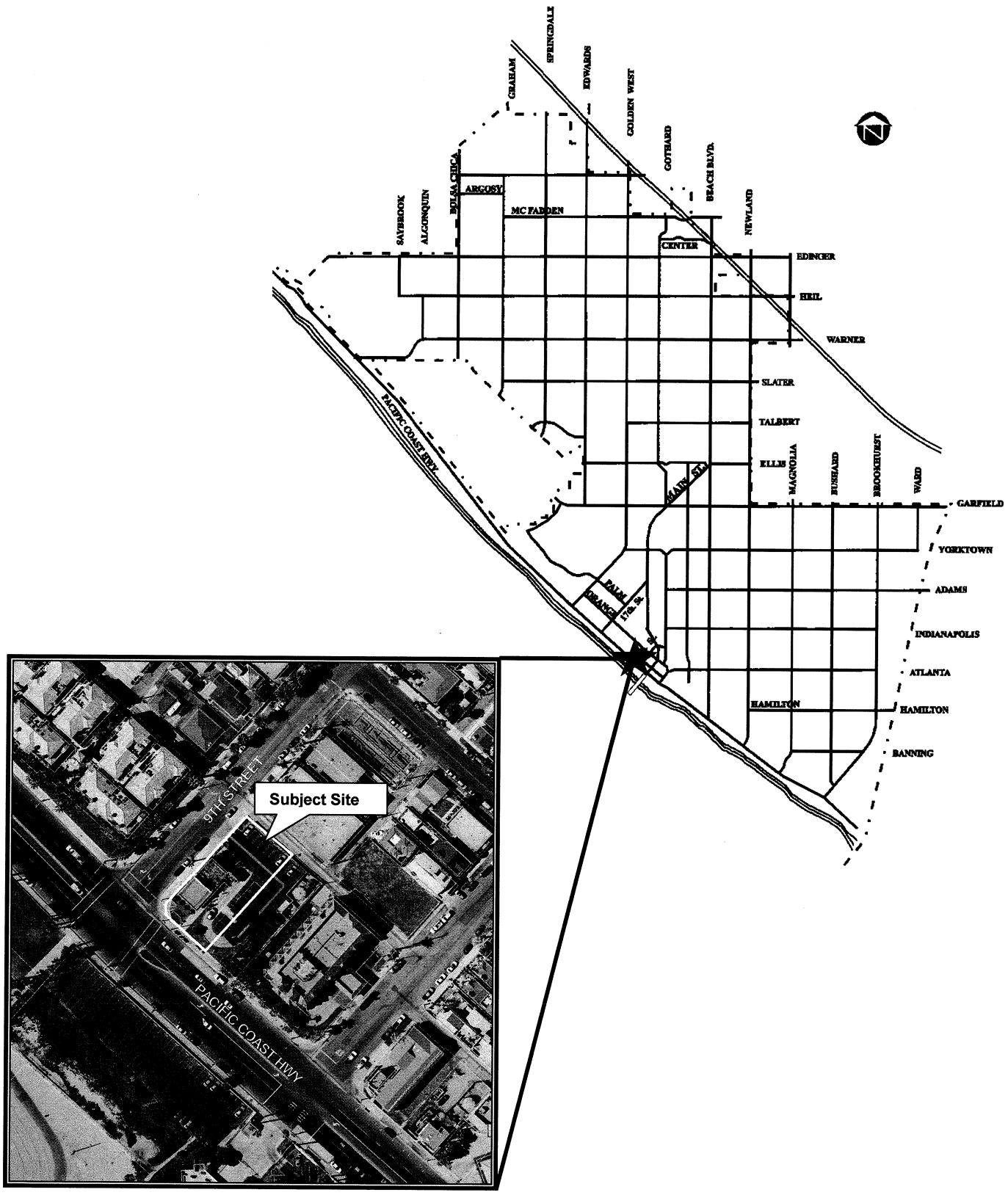
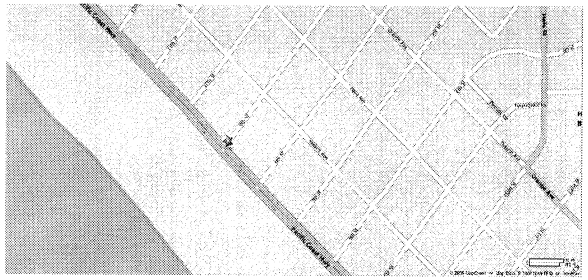


VICINITY MAP
DRAFT MITIGATED NEGATIVE DECLARATION NO. 09-003
(GARGUIS MIXED USE DEVELOPMENT– 110 9TH STREET)

ATTACHMENT NO. 1

110 9TH STREET

110 9TH STREET HUNTINGTON BEACH, CA 92648



LEGAL DESCRIPTION

LOT 8,9, AND 10 OF BLOCK 108 OF THE HUNTINGTON BEACH CITY, COUNTY OF ORANGE, STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 3, PAGE(S) 36, INCLUSIVE OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 024-123-08

SCOPE OF WORK .

NEW CONSTRUCTION OF MIXED USE THREE-STORY BUILDING WITH RETAIL AT GROUND LEVEL AND FOUR RESIDENTIAL UNITS ON UPPER FLOORS AND ONE SUBFLOOR FOR PARKING.

FLOOR AREA RATIO:.....1:1
LOT AREA.....11,865.874 SF.
NET LOT AREA.....11,528.374 SF.

LOT COVERAGE.....4,633.92 SF (40%)

. PROPERTY DEVELOPMENT STANDARDS .

DESCRIPTION	REQUIRED	PROVIDED
MIN. FRONT PCH SETBACK	25'-0"	25'-0"
UNDERGROUND PARKING SETBACK	5'-0"	5'-0"
REAR ALLEY SETBACK	12'-0" TO CENTER LINE	14'-0" TO CENTER LINE
9th STREET SETBACK	15'-0"	10'-0"
INTERIOR SIDE SETBACK	7'-0"	5'-0"
BUILDING HEIGHT	35'-0" TO MID. POINT	35'-0" TO MID. POINT

. A R C H I T E C T .

OTIS ARCHITECTURE INC.
16871 SEA WITCH LN
HUNTINGTON BEACH, CA 92649
714 . 846 . 0177
REP. KAREN OTIS

. C L I E N T .

GAURGUIS TWIN TOWERS, INC.
14250 VENTURA BLVD. SECOND FLOOR,
SHERMAN OAKS, CA. 91423
818.986.2274

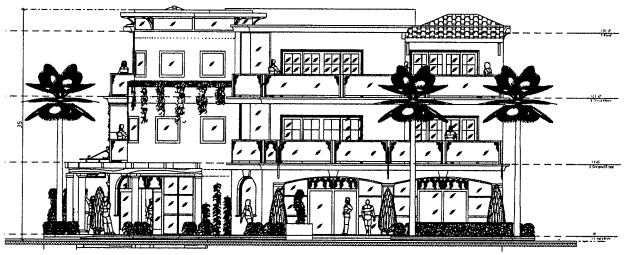
CIVIL ENGINEER:

NICK KAZEMI
4966 TOPANGA CYN. BLVD.
WOODLAND HILLS, CA. 91364
818.999.9890

PARKING REQUIREMENTS:

TOTAL PARKING REQUIRED: 22 STALLS
PARKING PROVIDED: 23 STALLS

RETAIL AREA.....13 STALLS
RESIDENTIAL AREA.....10 STALLS



. SQUARE FOOTAGE .

FIRST FLOOR.....2,399.2 SF.
RETAIL AREA
STORAGE AREA.....753.2 SF.

SECOND FLOOR.....3,062.17 SF.
RESIDENTIAL AREA

THIRD FLOOR.....3,287.35 SF.
RESIDENTIAL AREA

TOTAL BUILDING AREA....8,972.75 SF.

.COMMON OPEN SPACE.

COMMON OPEN SPACE: 25% OF 6,349.52 SF.
.....1,587.38 SF. REQUIRED
666.76 SF. PROVIDED

.PRIVATE OPEN SPACE (BALCONY).

APT. 201 114.57 SF.
APT. 202 172.39 SF.
APT. 301 114.54 SF.
APT. 302 219.88 SF.

TOTAL PRIVATE OPEN SPACE.
240.00 SF. REQUIRED
621.38 SF. PROVIDED

HUNTINGTON BEACH SECURITY ORDINANCE:

1. SLIDING GLASS DOORS AND WINDOWS LOCATED LESS THAN 16 FEET ABOVE ANY SURFACE AVAILABLE FOR USE BY THE PUBLIC SHALL BE CAPABLE OF BEING LOCKED SECURELY. MOVABLE PANELS SHALL NOT BE EASILY REMOVED FROM THE FRAME.

2. ALL MAIN OR FRONT ENTRY DOORS TO DWELLINGS SHALL BE ARRANGED SO THAT THE OCCUPANT HAS A VIEW OF HE AREA INMEDIATELY OUTSIDE WITHOUT OPENING THE DOOR. A DOOR VIEWER, A VIEW PORT, WINDOW, OR OTHER OPENING MAY PROVIDE SUCH VIEW.

3. EXTERIOR WOODEN DOORS SHALL BE OF SOLID CORE CONSTRUCTION OR SHALL BE COVERED ON THE INSIDE FACE WITH 16- GAUGE SHEET METAL ATTACHED WITH SCREWS AT 6 INCH ON CENTER AROUND THE PERIMETER.

4. ALL SWINGING DOORS SHALL BE EQUIPPED WITH A DEAD BOLT WITH A MINIMUM TRHOW OF 1 INCH AND AN EMBEDMENT OF NOT LESS THAN 5/8 INCH.

5. THE INACTIVE LEAF OF A PAIR OF DOORS AND THE UPPER LEAF OF DUTCH DOORS SHALL BE EQUIPPED WITH A DEAD BOLT.

6. NON - REMOVABLE PINS SHALL BE USED IN PIN TYPE HINGES THAT ARE ACCESIBLE FROM THE OUTSIDE WHEN THE DOOR IS CLOSED.

7. UNFRAMED GLASS DOORS SHALL BE OF FULLY TEMPERED GLASS NOT LESS THAN 1/2 INCH THICK.

8. NARROW-FRAMED GLASS DOORS SHALL BE OF FULLY TEMPERED GLASS NOT LESS THAN 1/4 INCH THICK.

9. ANY GLASS THAT IS LOCATED WITHIN 40 INCHES OF THE LOCKING DEVICE ON A DOOR SHALL BE FULLY TEMPERED , OR HAVE APPROVED METAL BARS, SCREENS OR GRILLS.

10. SOLID WOODEN HATCHWAYS LESS THAN 1-3/4 INCHES THICK SHALL BE COVERED ON THE INSIDE WITH 16 GAUGE SHEET METAL ATTACHED WITH SCREWS AT 6 INCH ON CENTER AROUND THE PERIMETER AND SHALL BE SECURED FROM THE INSIDE WITH A SLIDE BAR, SLIDE BOLTS, AND /OR PADLOCK WITH HARDENED STEEL SHACKLE. ALL OTHER OPENINGS LARGER THAN 96 SQUARE INCHES WITH A DIMENSION IN EXCESS OF 8 INCHES SHALL BE SECURED BY METAL BARS, SCREENS, OR GRILLS. (EXCEPTION: NO OPENABLE SKYLIGHTS).

11. A DEVELOPMENT THAT INCLUDES 3 OR MORE DWELLING UNITS SHALL BE PROVIDED WITH FULLY ENCLOSED GARAGES. GARAGE SPACE FOR EACH TENANT SHALL BE SEPARATED BY PARTITIONS OF 3/8 -INCH PLYWOOD OR EQUIVALENT WITH STUDS SET NO MORE THAN 24 INCHES ON CENTER.

ATTACHMENT NO. 2.1

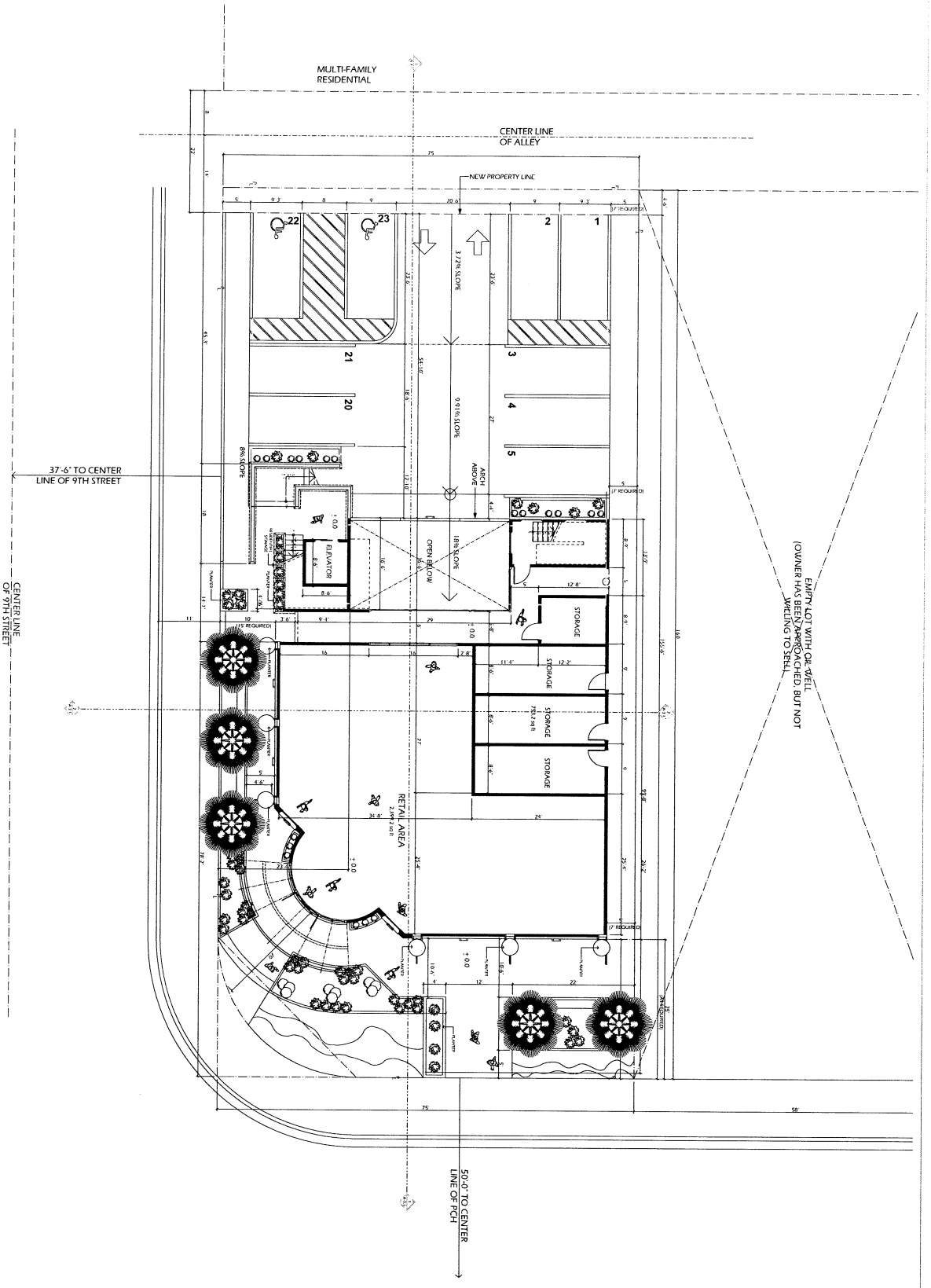
Otis Architecture Inc.
16871 Sea Witch Lane
Huntington Beach, CA 92649
(714) 846-0177 ph (714) 846-2817 fax
www.oisarchitecture.com

Revisions:

110 9TH STREET
New construction
HUNTINGTON BEACH, CA. 92648

TITLE SHEET

Date: 03-26-2010
Project Architect: K.Otis
Drawn: EM
Sheet Number: T-1

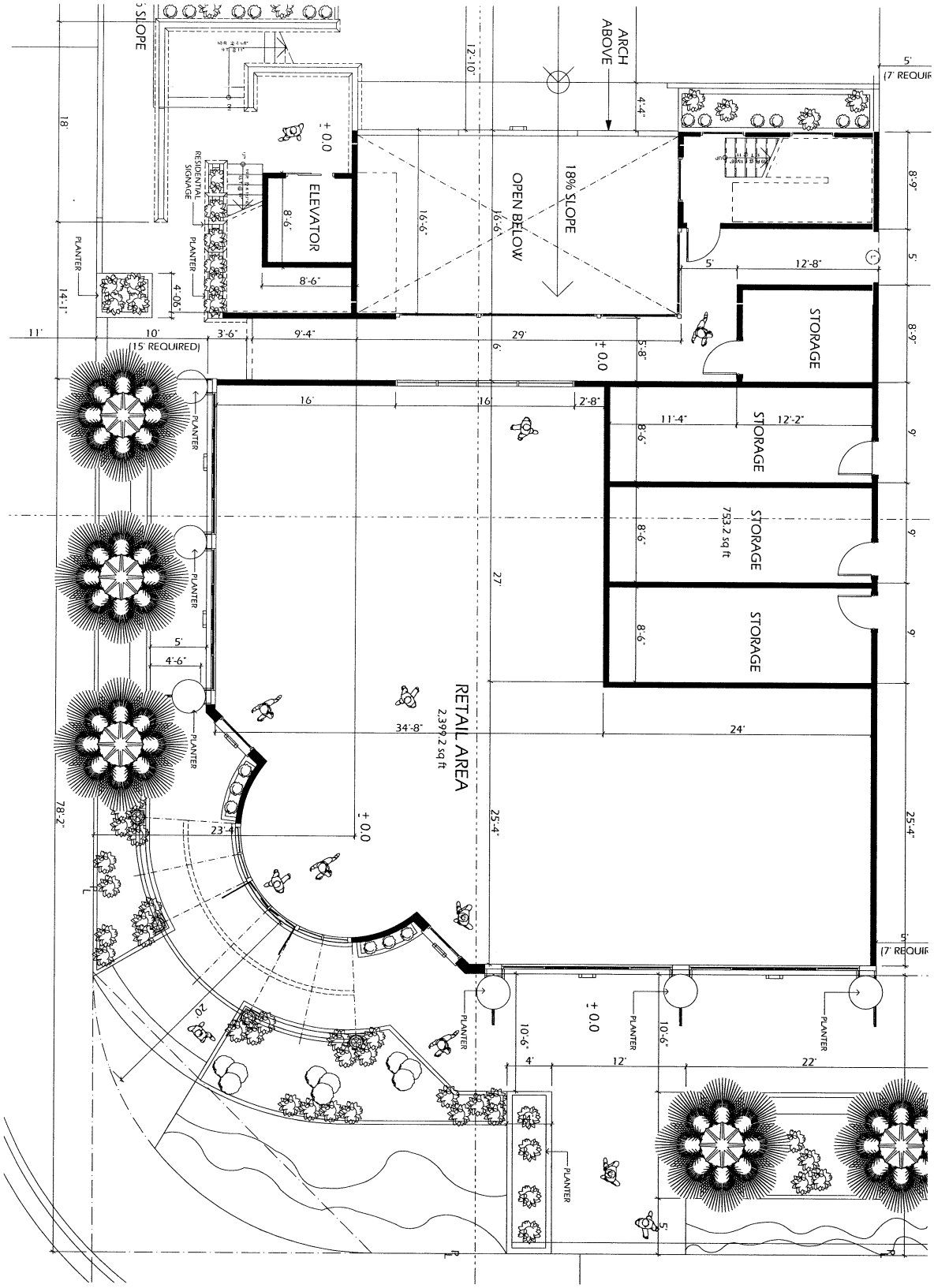


1 SITE PLAN

ATTACHMENT NO. 2.2

A-1.1	SITE PLAN	**110 9TH STREET** New construction **HUNTINGTON BEACH, CA. 92648**			Otis Architecture Inc. 16871 Sea Witch Lane Huntington Beach, CA 92649 (714) 846-0177 ph (714) 846-2817 fax www.otisarchitecture.com	Revisions:

Sheet Number: A-1.1
Drawn: EM
Project Architect: K.Otis
Date: 03-26-2010

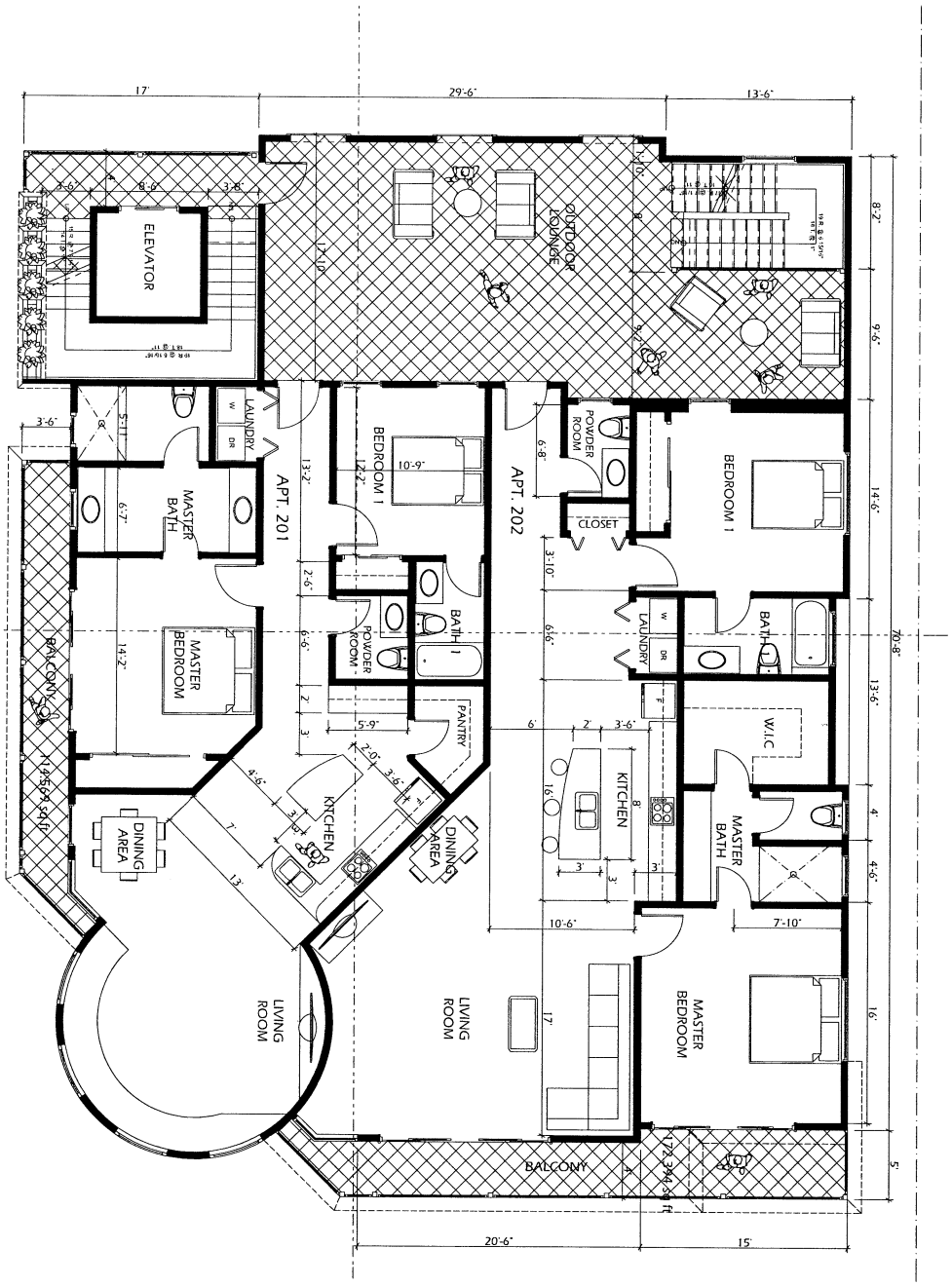


ATTACHMENT NO. 2.3

A-1.2	FIRST FLOOR PLAN	**110 9TH STREET** New construction **HUNTINGTON BEACH, CA. 92648**			Otis Architecture Inc. 16871 Sea Witch Lane Huntington Beach, CA 92649 (714) 846-0177 ph (714) 846-2817 fax www.otisarchitecture.com	Revisions:

Date: 03-26-2010
Project Architect: K.Otis
Drawn: EM
Sheet Number:

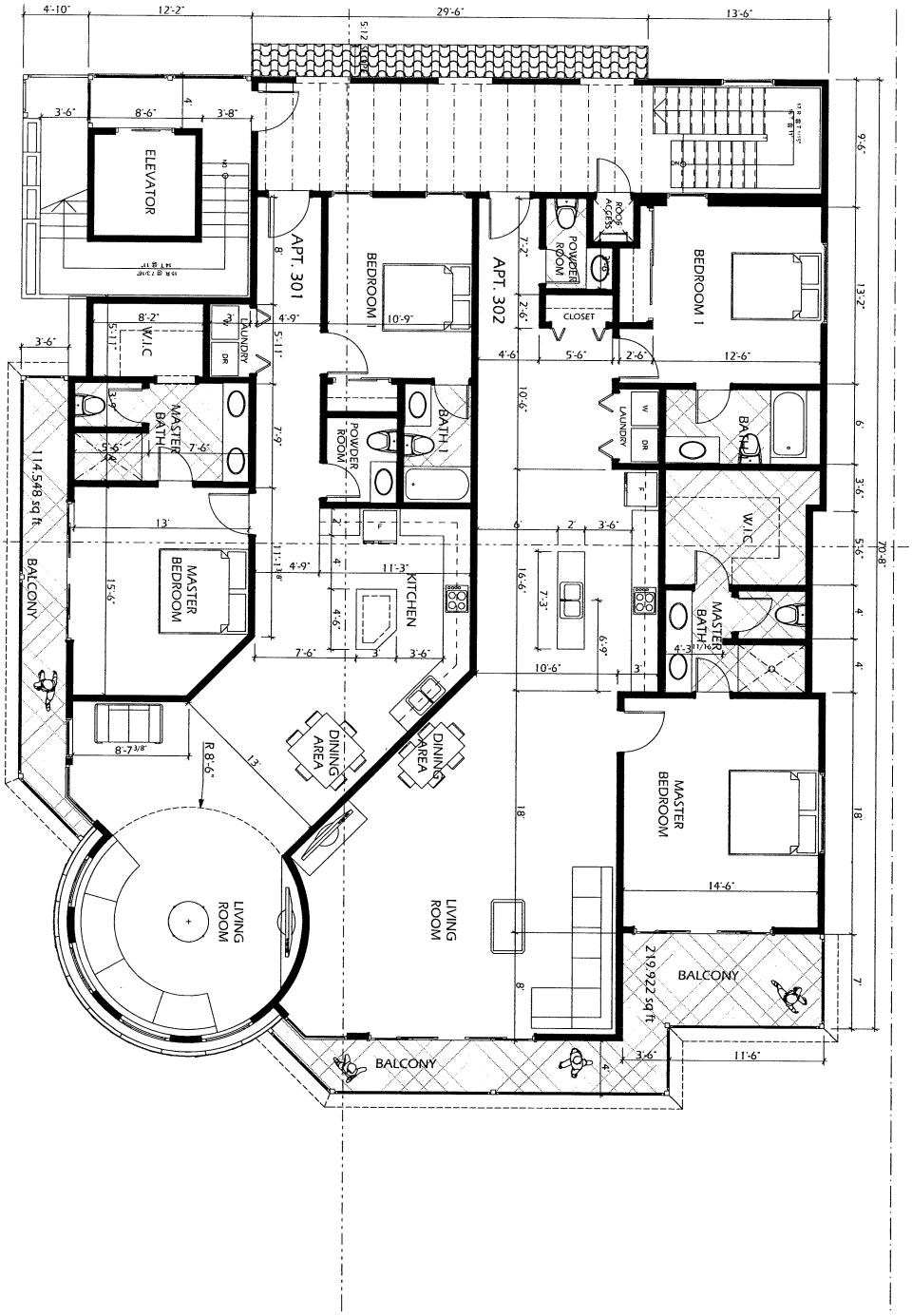
1 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"



ATTACHMENT NO. 2.4

A-1.3	SECOND FLOOR PLAN	**110 9TH STREET** New construction **HUNTINGTON BEACH, CA. 92648**			Otis Architecture Inc. 16871 Sea Witch Lane Huntington Beach, CA 92649 (714) 846-0177 ph (714) 846-2817 fax www.otisarchitecture.com

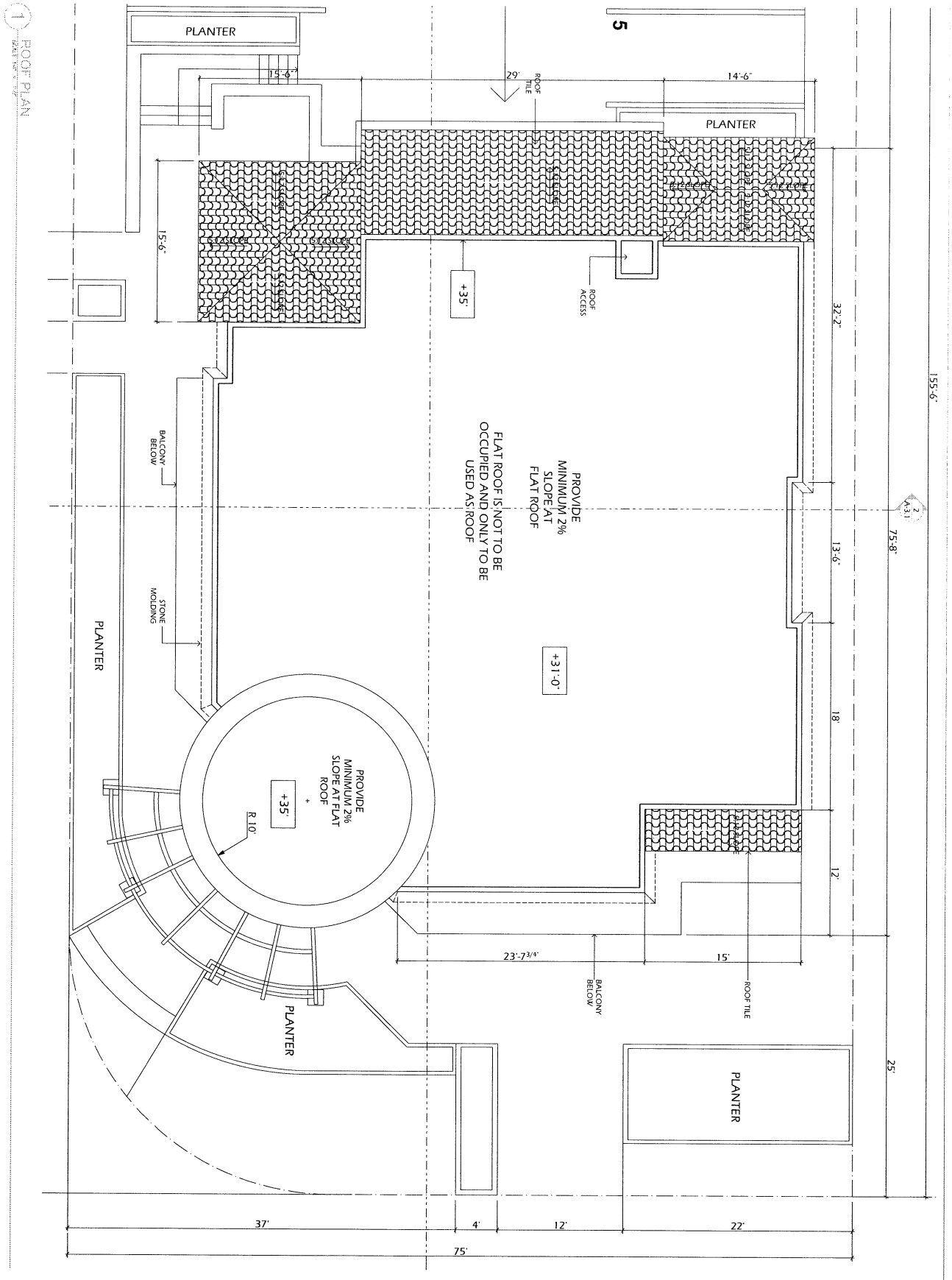
Date: 03-26-2010
Project Architect: K.Otis
Drawn: EM
Sheet Number:



A-1.4	THIRD FLOOR / DECK	**110 9TH STREET** New construction **HUNTINGTON BEACH, CA. 92648**		Otis Architecture Inc 16871 Sea Witch Lane Huntington Beach, CA 92649 (714) 846-0177 ph (714) 846-2817 fax www.otisarchitecture.com

Sheet Number: A-1.4
Drawn: EM
Project Manager: K.Otis
Date: 03-26-2010

ATTACHMENT NO. 2.5



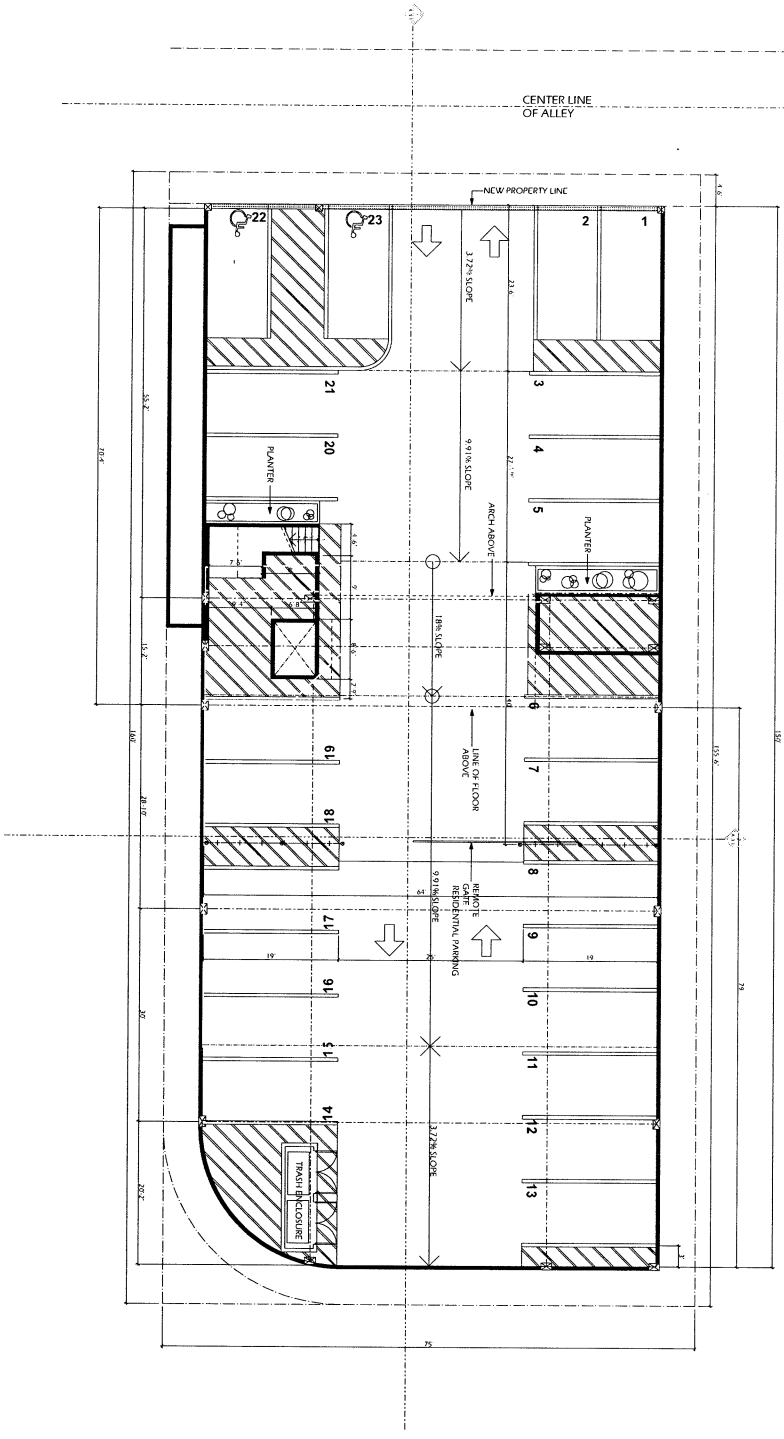
1 ROOF PLAN
SCALE: 1/8" = 1'-0"

A-1.5	ROOF PLAN	**110 9TH STREET** New construction **HUNTINGTON BEACH, CA. 92648**		Otis Architecture Inc 16871 Sea Witch Lane Huntington Beach, CA 92649 (714) 846-0177 ph (714) 846-2817 fax www.otisarchitecture.com

Date: 03-26-2010
Project Manager: K Otis
Drawn: EM
Sheet Number:

ATTACHMENT NO. 2.9

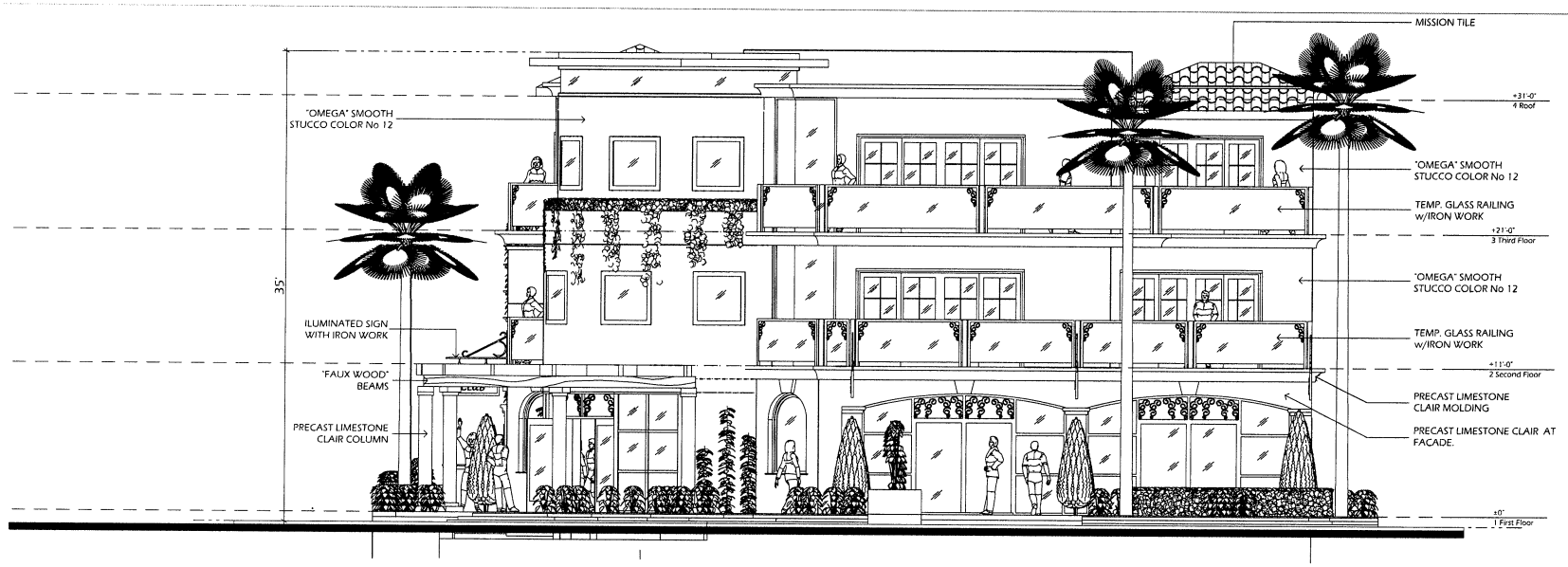
1 SUB FLOOR



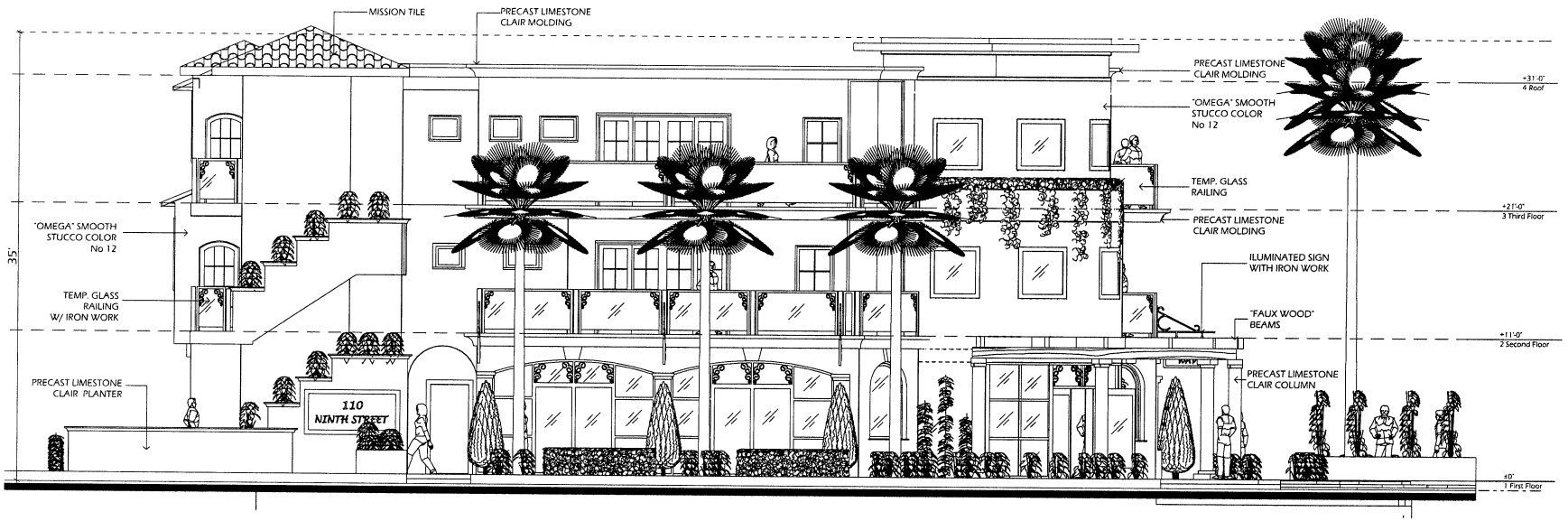
A-1.6	Sheet Number: EM Drawn: K.Otis Project Architect: Date: 03-26-2010	SUBFLOOR	**110 9TH STREET** New construction **HUNTINGTON BEACH, CA. 92648**		OTIS Architecture Inc. 16871 Sea Witch Lane Huntington Beach, CA 92649 (714) 846-0177 ph (714) 846-2817 fax www.otisarchitecture.com

ATTACHMENT NO. 2.7

ATTACHMENT NO. 2.8



1 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



2 WEST ELEVATION
SCALE: 1/8" = 1'-0"

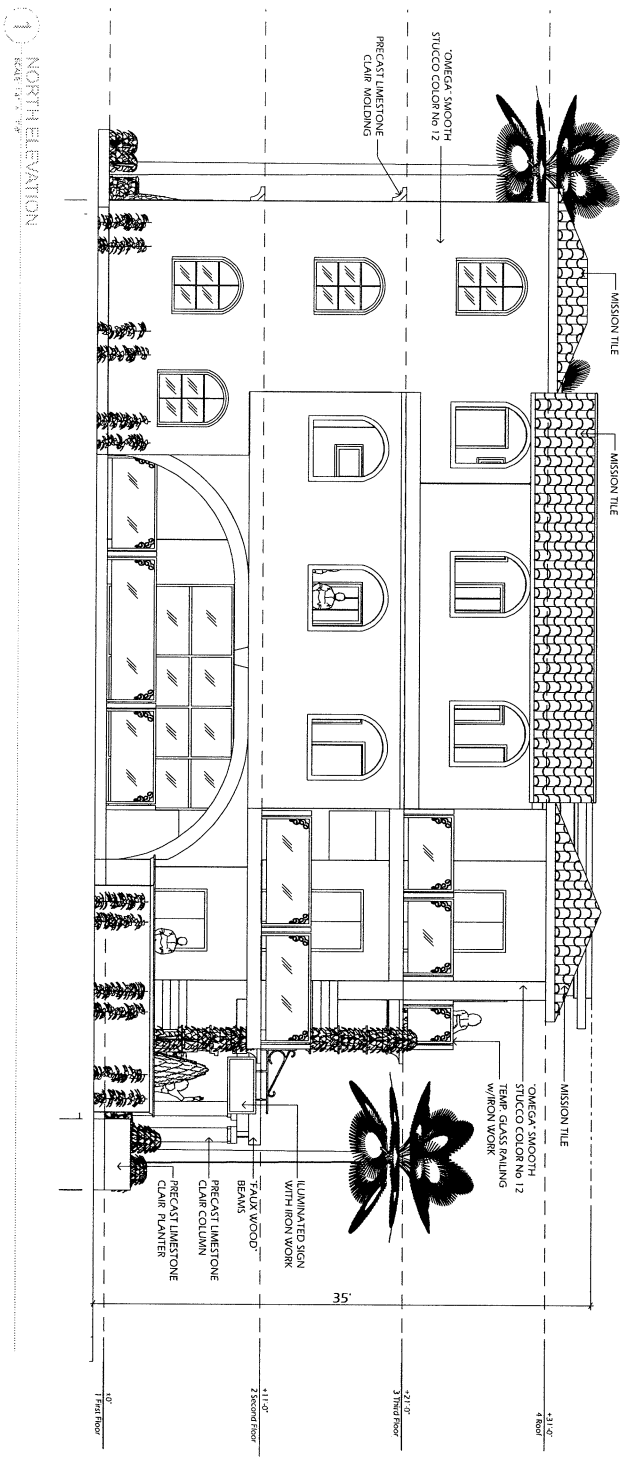
Otis Architecture Inc.
16871 Sea Witch Lane
Huntington Beach, CA 92649
(714) 846-0177 ph (714) 846-2817 fax
www.otisarchitecture.com

Revision:

110 9TH STREET
New construction
HUNTINGTON BEACH, CA. 92648

EXTERIOR ELEVATIONS

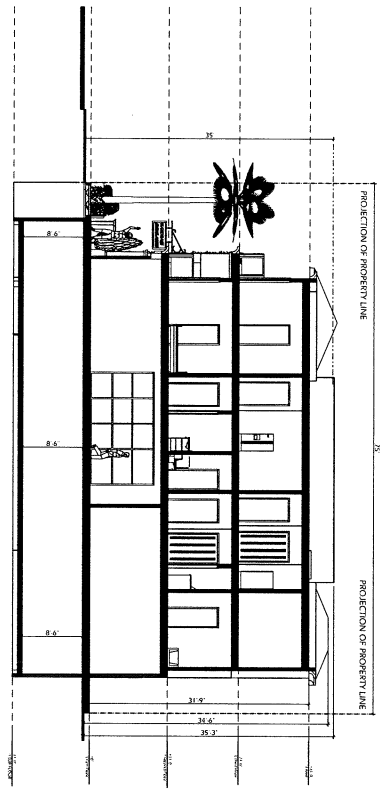
Date: 03-26-2010
Project Architect: K.Otis
Drawn: EM
Sheet Number: A-2.1



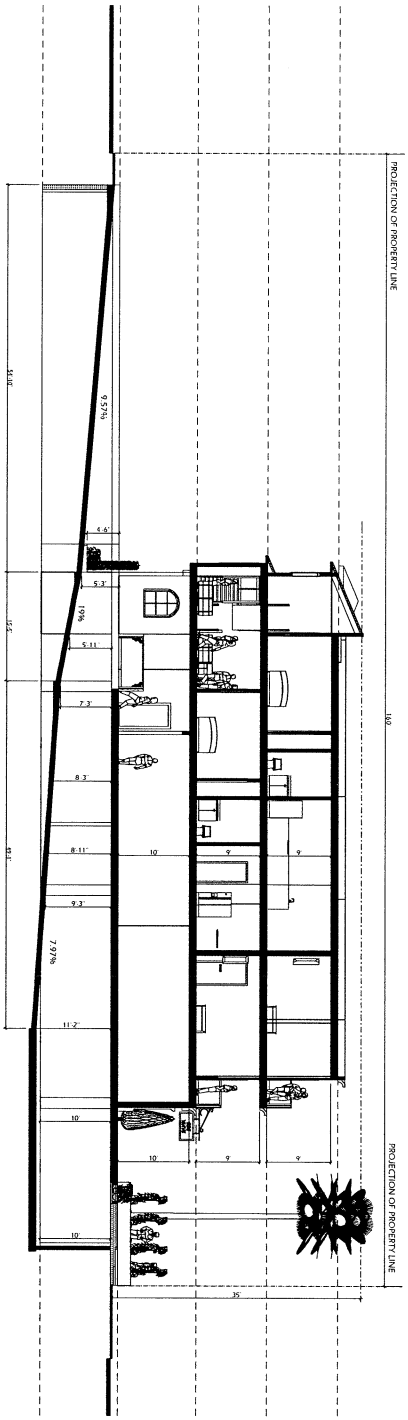
ATTACHMENT NO. 2.9

Date: 03-26-2010 Project Architect: K.Otis Drawn: EM Sheet Number: A-2.2	EXTERIOR ELEVATIONS	**110 9TH STREET** New construction **HUNTINGTON BEACH, CA. 92648**			Otis Architecture Inc. 16871 Sea Witch Lane Huntington Beach, CA 92649 (714) 846-0177 ph (714) 846-2817 fax www.otisarchitecture.com	Revisions:

2 SECTION B-B'
SCALE: 1/4" = 1'-0"



1 SECTION A-A'
SCALE: 1/4" = 1'-0"



ATTACHMENT NO. 2.10

A-3.1 Sheet Number	BUILDING SECTIONS	**110 9TH STREET** New construction **HUNTINGTON BEACH, CA. 92648**			Otis Architecture Inc. 16871 Sea Witch Lane Huntington Beach, CA 92649 (714) 846-0177 ph (714) 846-2817 fax www.otisarchitecture.com

Date: 03-26-2010
Project Architect: K.Otis
Drawn: EM
Revisions:

OTIS ARCHITECTURE

Narrative for 110 9th Street:

The proposed project is for a mixed use three-story building with commercial retail at the first level, and two dwellings at the second floor, and two dwellings at the third floor.

The design carefully addresses the corner lot and maintains the front 25' setback so as to blend well with its neighboring buildings. We are requesting a special permit to reduce the 9th street setback from 15' to 10'; and for the interior setback to be reduced from 7' to 5'.

An eye-catching circular element demarcates the corner of 9th street and Pacific Coast Highway complementing many of the existing corner elements in the Downtown zone. The stone "base" of the building is detailed with columns and arches that enhance the Mediterranean style and provide a clear distinction between upper and lower floors. There is a high ratio of window to wall at the first floor retail to encourage window shopping. Much attention has been given to the articulation of the building facades in order to create interest and balance in the massing, and contrasting colors between the cast stone and stucco are used to enhance the architecture. The detailing for signage, lighting, and planting all contribute to the building's curb appeal and encourage pedestrian involvement.

The entrance to the residential units is located on 9th street and demarcated with a mosaic tile sign. Stepped planters line the outdoor staircase at 9th street further enhancing the Mediterranean architecture.

The required height limitation, underground setback, parking requirements, PCH front setback, and alley setback have all been met.

Additionally we have provided 667 sf of common open space for the tenants located on the second floor "outdoor lounge." This space will be further defined with seating and lounges for communal gatherings. We feel that the ample open space of the beach directly across from the project will also be utilized by the tenants for recreational activities.

Each dwelling unit has ample private open space; in most cases double the required square footage. The total required private open space is 240 sf; while this project provides 621 sf of private open space.

ATTACHMENT NO. 3

16871 SEA WITCH LANE HUNTINGTON BEACH CALIFORNIA 92649 TEL: 714 846 0177 FAX: 714 846 2817 EMAIL: OTISARCH@AOL.COM

SOILS INVESTIGATION
Proposed Mixed-Use Development
110 9th Street
Huntington Beach, California

Juan Solá
Asset Manager
SCHAEFER FUNDS, LLC
14250 Ventura Boulevard, 2nd Floor
Sherman Oaks, California 91423

Project Number 15039-09
December 3, 2009

NorCal Engineering

ATTACHMENT NO. 4.1

TABLE OF CONTENTS

ATTACHMENT NO. 4.2

NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS
10641 HUMBOLT STREET LOS ALAMITOS, CA 90720
(562)799-9469 FAX (562)799-9459

December 3, 2009 Project Number 15039-09

Juan Solá
Asset Manager
SCHAEFER FUNDS, LLC
14250 Ventura Boulevard, 2nd Floor
Sherman Oaks, California 91423

RE: **SOILS INVESTIGATION** – Proposed Mixed-Use Development – Located at 110 9th Street, in the City of Huntington Beach, California

Dear Mr. Sola:
Pursuant to your request, this firm has performed a Soils Investigation for the above referenced project. The purpose of this investigation is to evaluate the geotechnical conditions of the subject site and to provide recommendations for the proposed development. This geotechnical engineering report presents the findings of our study along with conclusions and recommendations for development.

1.0 STRUCTURAL CONSIDERATIONS

1.1 Proposed Development

It is proposed to construct a new three story over subterranean parking mixed-use building on the site. Excavations of approximately 12 feet in depth are expected. Pavement areas and some landscaping are also proposed.

Final building plans shall be reviewed by this firm prior to submittal for city approval to determine the need for any additional study and revised recommendations pertinent to the proposed development, if necessary.

ATTACHMENT NO. 4.3

2.0 SITE DESCRIPTION

2.1 **Location:** The property is situated at the northeasterly corner of Pacific Coast Highway and 9th Street in the City of Huntington Beach. An alleyway borders to the north and an active oil well and above-ground storage tank are located to the east.

2.2 **Existing Conditions:** The site is occupied by a former Taco Bell restaurant building and associated asphaltic and concrete pavement areas.

Drainage of the relatively level site appears to sheetflow toward adjacent roadways.

3.0 FIELD INVESTIGATION

3.1 Site Exploration

The investigation consisted of the placement of four subsurface exploratory excavations by hollow-stem auger drill rig and hand auger to a maximum depth of 26 feet below current ground elevations. The borings were placed at accessible locations across the site. Existing improvements limited the placement of the borings.

The explorations were visually classified and logged by a field engineer with locations of the subsurface explorations shown on the attached Figure 1. The exploratory excavations revealed the existing earth materials to consist of fill and natural soil zones. A detailed description of the subsurface conditions are listed on the excavation logs in Appendix A. It should be noted that the transition from one soil type to another as shown on the borings logs is approximate and may in fact be a gradual transition. The soils encountered are described as follows:

ATTACHMENT NO. 4.4

Fill: Fill soils classifying as silty SAND with some gravel and minor debris were encountered across the site to depths ranging from 2 to 3 feet. The fill is considered medium dense and variable in moisture content.

Natural: Native, undisturbed soils classifying as silty SAND were encountered beneath the upper fill soils. The native soils as encountered were observed to be medium dense and damp to moist. Clay and silt content generally increased with depth of borings. No caving occurred in the excavations.

3.2 Groundwater

Groundwater was not encountered in any of our borings and is not anticipated to be a factor in the planned development. Plate 1.2 of Department of Conservation, Division of Mines and Geology Seismic Hazard Report 020, indicates historic high groundwater in the site vicinity on the order of 30 feet below grade.

4.0 LABORATORY TESTS

Relatively undisturbed samples of the subsurface soils were obtained to perform laboratory testing and analysis for direct shear, consolidation tests, and to determine in-place moisture/densities. These relatively undisturbed ring samples were obtained by driving a thin-walled steel sampler lined with one-inch long brass rings with an inside diameter of 2.42 inches 12 inches into the undisturbed soils. Blowcounts required to drive the sampler are included on the attached boring logs.

Bulk bag samples were obtained in the upper soils for expansion index tests, maximum density tests and corrosion tests. Wall loadings on the order of 4,000 lbs./lin.ft. and maximum compression loads on the order of 100 kips were utilized for testing and design purposes. All test results are included in Appendix B, unless otherwise noted.

4.1 **Field moisture content** (ASTM:D 2216-05) and the dry density of the ring samples were determined in the laboratory. This data is listed on the logs of explorations.

4.2 **Maximum density tests** (ASTM: D-1557-07) were performed on typical samples of the upper soils. Results of these tests are shown on Table I.

4.3 **Expansion index tests** (ASTM: D-4829-07) in accordance with the California Building Code Standard were performed on remolded samples of the upper soils to determine the expansive characteristics and to provide any necessary recommendations for reinforcement of the slabs-on-grade and the foundations. Results of these tests are provided on Table II and are discussed later in this report.

4.4 **Atterberg Limits** (ASTM: D 4318-05) consisting of liquid limit, plastic limit and plasticity index were performed on selected soil samples. Results are shown on Table III.

4.5 **Direct shear tests** (ASTM: D-3080-04) were performed on undisturbed and disturbed samples of the subsurface soils. These tests were performed to determine parameters for the calculation of the safe bearing capacity. The test is performed under saturated conditions at loads of 1,000 lbs./sq.ft., 2,000 lbs./sq.ft., and 3,000 lbs./sq.ft. with results shown on Plates A and B.

4.6 **Consolidation tests** (ASTM: D-2435-04) were performed on undisturbed samples to determine the differential and total settlement which may be anticipated based upon the proposed loads. Water was added to the samples at a surcharge of one KSF and the settlement curves are plotted on Plates C and D.

4.7 **Soluble sulfate, pH, Resistivity and Chloride tests** to determine potential corrosive effects of soils on concrete and metal structures were performed in the laboratory. Test results are given in Tables IV – VII and are discussed later within this report.

ATTACHMENT NO. 4.6

5.0 SEISMICITY EVALUATION

The proposed development lies outside of any Alquist Priolo Special Studies Zone and the potential for damage due to direct fault rupture is considered unlikely.

The following site seismic information may be used for design considerations.

Seismic Design Criteria

Site Location – Region 1	Latitude	33.6602°
	Longitude	-118.0056°
Seismic Use Group		II
Site Class		D
Seismic Design Category		D
Maximum Spectral Response Acceleration	S_S	1.657g
	S_1	0.616g
Site Coefficients	F_a	1.0
	F_v	1.5
Adjusted Maximum Acceleration	S_{MS}	1.657g
	S_{M1}	0.924g
Design Spectral Response Acceleration Parameters	S_{DS}	1.104g
	S_{D1}	0.616g

A Magnitude 6.9 earthquake along the Newport-Inglewood fault zone, which is located within 2 kilometers from the subject property, is possible.

Ground shaking originating from earthquakes along other active faults in the region is expected to induce lower horizontal accelerations due to smaller anticipated earthquakes and/or greater distances to other faults.

ATTACHMENT NO. 4.7

6.0 LIQUEFACTION AND LANDSLIDE EVALUATION

The site lies outside of areas mapped as potentially liquefiable susceptible to earthquake induced landslides by the State of California Seismic Hazards Mapping Act. In addition, the site is underlain by dense marine deposits with a historic high groundwater depth in excess of 30 feet below existing grade. Thus, the design of the proposed construction in conformance with the latest Building Code provisions for earthquake design is expected to provide mitigation of ground shaking hazards that are typical to Southern California.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon our evaluations, the proposed development is acceptable from a geotechnical engineering standpoint. By following the recommendations and guidelines set forth in our report, the structures and grading will be safe from excessive settlements under the anticipated design loadings and conditions. The proposed development shall meet all requirements of the City Building Ordinance and will not impose any adverse effect on existing adjacent land or structures.

The following recommendations are based upon soil conditions encountered in our field investigation; these near-surface soil conditions could vary across the site. Variations in the soil conditions may not become evident until the commencement of grading operations for the proposed development and revised recommendations from the soils engineer may be necessary based upon the conditions encountered.

7.1 Site Grading Recommendations

It is recommended that site inspections be performed by a representative of this firm during all grading and construction of the development to verify the findings and recommendations documented in this report. Any unusual conditions which may be encountered in the course of the project development may require the need for additional study and revised recommendations.

Any vegetation shall be removed and hauled from proposed grading areas prior to the start of grading operations. Existing vegetation shall not be mixed or disced into the soils. Any removed soils may be reutilized as compacted fill once any deleterious material or oversized materials (in excess of eight inches) is removed. Grading operations shall be performed in accordance with the attached *Specifications for Placement of Compacted Fill.*

7.1.1 Removal and Recompaction Recommendations

Prior to placement of any additional compacted fill soils, pavement and slabs, the upper 2 to 3 feet of existing fill soils and any low density soils remaining after subterranean excavations are made shall be removed to competent native ground, the exposed soils scarified to a depth of 8 inches, brought to within 2% of optimum moisture content and compacted to a minimum of 90% of the laboratory standard (ASTM: D-1557-07). Grading shall extend a minimum of 5 horizontal feet outside the edges of foundations or equidistant to the depth of fill placed, whichever is greater, where possible.

ATTACHMENT NO. 4.9

Care should be taken to provide or maintain adequate lateral support for all adjacent improvements and structures at all times during the grading operations and construction phase. Adequate drainage away from the structures, pavement and slopes should be provided at all times.

It is possible that other isolated areas of low density soils in excess of that encountered in our test borings and not described in this report are present on site. If found, these areas should be treated as discussed earlier. A diligent search shall also be conducted during grading operations in an effort to uncover any underground structures, irrigation or utility lines. If encountered, these structures and lines shall be either removed or properly abandoned prior to the proposed construction.

If placement of slabs-on-grade and pavement is not completed immediately upon completion of grading operations, additional testing and grading of the areas may be necessary prior to continuation of construction operations. Likewise, if adverse weather conditions occur which may damage the subgrade soils, additional assessment by the soils engineer as to the suitability of the supporting soils may be needed.

7.1.2 **Fill Blanket Recommendations**

Due to the potential for differential settlement of structures supported on both native and compacted fill materials, it is recommended that all foundations be underlain by a uniform compacted fill blanket at least 2 feet in thickness. This fill blanket shall extend a minimum of 5 horizontal feet outside the edges of foundations or equidistant to the depth of fill placed, whichever is greater.

ATTACHMENT NO. 4.10

In lieu of placing the compacted fill blanket beneath foundations, all footings may be extended through any fill soils and into competent native ground as described in Section 7.3 of this report.

7.2 **Temporary Excavation and Shoring Design**

Temporary unsurcharged excavations less than 4 feet in height may be made at vertical inclinations. Excavations from 4 to 10 feet in height in the existing site materials may be trimmed at a 1 to 1 (horizontal to vertical) gradient. Excavations in excess of 10 should be further evaluated by this firm. In areas where soils with little or no binder are encountered, where adverse geological conditions are exposed, or where excavations are adjacent to existing structures, shoring, slot-cutting, or flatter excavations may be required. Analysis of possible excavations along the property lines will be made when building plans have been provided for review.

The temporary cut slope gradients given above do not preclude local raveling and sloughing. All excavations shall be made in accordance with the requirements of the soils engineer, CAL-OSHA and other public agencies having jurisdiction.

Temporary shoring design may utilize an active earth pressure of 25 pcf without any surcharge due to adjacent traffic, equipment or structures. The passive fluid pressures of 250 pcf may be doubled to 500 pcf for temporary design. The final shoring structural calculations and drawings should be reviewed by this firm prior to installation.

7.3 Foundation Design

All new foundations may be designed utilizing the following allowable soil bearing capacities for an embedded depth of 30 inches with the corresponding widths. Footings shall be embedded into either compacted fill *or* native soils due to the potential for differential settlement of structures.

Allowable Soil Bearing Capacity (psf)

Width (ft)	Continuous Foundation	Isolated Foundation
1.5	2000	2500
2.0	2075	2575
4.0	2375	2875
6.0	2675	3175

A one-third increase may be used when considering short term loading from wind and seismic forces. A minimum of two #4 bars top and two bottom shall be incorporated in the design for all continuous foundations. Reinforcement of pad foundations is at the discretion of the structural engineer. An increase in steel reinforcement due to soil expansion or proposed loadings may be necessary and shall be determined by the project engineers and/or architect. A representative of this firm shall observe foundation excavations prior placement of concrete.

7.4 Settlement Analysis

Resultant pressure curves for the consolidation tests are shown on Plates C-D. Computations utilizing these curves and the recommended allowable soil bearing capacities reveal that the foundations will experience normal settlements on the order of 3/4 inch and differential settlements of less than 1/4 inch. Results of the tests also indicate that the potential for hydro-consolidation is low.

ATTACHMENT NO. 4.12

7.5 Lateral Resistance

The following values may be utilized in resisting lateral loads imposed on the structure. Requirements of the California Building Code should be adhered to when the coefficient of friction and passive pressures are combined.

Coefficient of Friction - 0.35
Equivalent Passive Fluid Pressure = 200 lbs./cu.ft.
Maximum Passive Pressure = 2,000 lbs./cu.ft.

The passive pressure recommendations are valid only for approved compacted fill soils.

7.6 Retaining Wall Design Parameters

Active earth pressures against retaining walls will be equal to the pressures developed by the following fluid densities. These values are for fill material placed behind the walls at various ground slopes above the walls.

Surface Slope of Retained Materials (Horizontal to Vertical)	Equivalent Fluid Density (lb./cu.ft.) Imported Granular Soils
Level	30
5 to 1	35
4 to 1	38
3 to 1	40
2 to 1	45

Any applicable short-term construction surcharges and seismic forces should be added to the above lateral pressure values.

ATTACHMENT NO. 4.13

The backfill zone of free draining material shall consist of a wedge beginning a minimum of one horizontal foot from the base of the wall extending upward at an inclination of no less than 3/4 to 1 (horizontal to vertical) as shown on the attached Figure 6. All walls shall be waterproofed as needed and protected from hydrostatic pressure by a reliable permanent subdrain system.

When required by the local building department and building code, the following seismic loadings should be incorporated into the design calculations for retaining walls. During a local Magnitude 6.9 earthquake along the Newport-Inglewood fault zone, additional lateral pressures will occur along the back of the wall. The seismic-induced lateral soil pressure may be computed using a triangular pressure distribution with the maximum value at the top of the wall. The maximum lateral pressure of (20 pcf)H where H is the height of the retained soils above the wall footing should be used in final design of retaining walls. Sliding resistance values and passive fluid pressure values given in our previous report may be increased by 1/3 during short term wind and seismic loading conditions.

7.7 Slab-On-Grade Design

Floor slabs-on-grade shall be a minimum of 5 inches in thickness and may be placed upon fill soils compacted to a minimum of 90% relative compaction and pre-moistened to 3% above optimum levels to a depth of 18 inches as verified by the soil engineer. Exterior flatwork may be 4 inches in thickness. An effective plasticity index of 29 may be used in slab design.

ATTACHMENT NO. 4.14

Slabs shall be minimally reinforced with #4 bars at 16 inches on-center, both directions, positioned mid-height in the slab. Additional reinforcement requirements and an increase in thickness of the slabs-on-grade may be necessary based upon soils expansion potential and proposed loading conditions in the structures and should be evaluated further by the project engineers and/or architect.

A vapor retarder should be utilized in areas which would be sensitive to the infiltration of moisture. This retarder shall meet requirements of ASTM E 96, *Water Vapor Transmission of Materials* and ASTM E 1745, *Standard Specification for Water Vapor Retarders used in Contact with Soil or Granular Fill Under Concrete Slabs.* The vapor retarder shall be installed in accordance with procedures stated in ASTM E 1643, *Standard practice for Installation of Water Vapor Retarders used in Contact with Earth or Granular Fill Under Concrete Slabs.*

The moisture retarder may be placed directly upon compacted subgrade, although 2 inches of sand beneath the membrane is desirable. The subgrade upon which the retarder is placed shall be smooth and free of rocks, gravel or other protrusions which may damage the retarder. Use of sand above the retarder is under the purview of the structural engineer; if sand is used over the retarder, it should be placed in a dry condition.

ATTACHMENT NO. 4.15

7.8 **Expansive Soil**

The soils at the site are "moderate" in expansion potential (Expansion potential = 51-90). Sites with expansive on site soils (Expansion potential >20) require special attention during project design and maintenance. The attached *Expansive Soil Guidelines* should be reviewed by the engineers, architects, owner, maintenance personnel and other interested parties and considered during the design of the project and future property maintenance.

7.9 **Utility Trench and Excavation Backfill**

Trenches from installation of utility lines and other excavations may be backfilled with on-site soils or approved imported soils compacted to a minimum of 90% relative compaction. All utility lines shall be properly bedded and shaded with clean sand having a sand equivalency rating of 30 or more. These materials shall be thoroughly water jetted or otherwise compacted around the pipe structure prior to placement of compacted backfill soils.

7.10 **Corrosion Design Criteria**

Representative samples of the surficial soils revealed negligible sulfate concentrations and no special concrete design recommendations are deemed necessary at this time. It is recommended that additional sulfate tests be performed at the completion of rough grading to assure that the as graded conditions are consistent with the recommendations stated in this design. Sulfate test results may be found on the attached Table IV.

ATTACHMENT NO. 4.16

Tests were also conducted on a random representative sample of soils to determine the potential corrosive effects on buried metallic structures. Tests for pH, resistivity and chloride are included on Tables IV – VI. Soil pH indicates a slightly acidic condition. Resistivity is indicative of a condition which may be considered moderately corrosive to metallic structures. Chloride content is considered low. Additional corrosion tests may need to be completed at conclusion of site grading.

8.0 CLOSURE

The recommendations and conclusions contained in this report are based upon the soil conditions uncovered in our test excavations. No warranty of the soil condition between our excavations is implied. NorCal Engineering should be notified for possible further recommendations if unexpected to unfavorable conditions are encountered during construction phase. It is the responsibility of the owner to ensure that all information within this report is submitted to the Architect and appropriate Engineers for the project.

This firm should have the opportunity to review (72 hours required) the final plans to verify that all our recommendations are incorporated. This report and all conclusions are subject to the review of the controlling authorities for the project.

A preconstruction conference should be held between the developer, general contractor, grading contractor, city inspector, architect, and soil engineer to clarify any questions relating to the grading operations and subsequent construction. Our representative should be present during the grading operations and construction phase to certify that such recommendations are complied within the field.

ATTACHMENT NO. 4.17

This geotechnical investigation has been conducted in a manner consistent with the level of care and skill exercised by members of our profession currently practicing under similar conditions in the Southern California area. No other warranty, expressed or implied is made.

We appreciate this opportunity to be of service to you. If you have any further questions, please do not hesitate to contact the undersigned.

Respectfully submitted,
NORCAL ENGINEERING

Keith D. Tucker
Project Engineer
R.G.E. 841

Mark A. Burkholder
Project Manager

SPECIFICATIONS FOR PLACEMENT OF COMPACTED FILL

Excavation
Any existing low density soils and/or saturated soils shall be removed to competent natural soil under the inspection of the Soils Engineering Firm. After the exposed surface has been cleansed of debris and/or vegetation, it shall be scarified until it is uniform in consistency, brought to the proper moisture content and compacted to a minimum of 90% relative compaction (in accordance with ASTM: D-1557-07).

In any area where a transition between fill and native soil or between bedrock and soil are encountered, additional excavation beneath foundations and slabs will be necessary in order to provide uniform support and avoid differential settlement of the structure. Verification of elevations necessary to achieve the required compacted fill blanket are the responsibility of the owner or his representative.

Material For Fill
The on-site soils or approved import soils may be utilized for the compacted fill provided they are free of any deleterious materials and shall not contain any rocks, brick, asphaltic concrete, concrete or other hard materials greater than eight inches in maximum dimensions. Any import soil must be approved by the Soils Engineering firm a minimum of 72 hours prior to importation of site.

Placement of Compacted Fill Soils
The approved fill soils shall be placed in layers not excess of six inches in thickness. Each lift shall be uniform in thickness and thoroughly blended. The fill soils shall be brought to within 2% of the optimum moisture content, unless otherwise specified by the Soils Engineering firm. Each lift shall be compacted to a minimum of 90% relative compaction (in accordance with ASTM: D-1557-07) and approved prior to the placement of the next layer of soil. Compaction tests shall be obtained at the discretion of the Soils Engineering firm but to a minimum of one test for every 500 cubic yards placed and/or for every 2 feet of compacted fill placed.

The minimum relative compaction shall be obtained in accordance with accepted methods in the construction industry. The final grade of the structural areas shall be in a dense and smooth condition prior to placement of slabs-on-grade or pavement areas. No fill soils shall be placed, spread or compacted during unfavorable weather conditions. When the grading is interrupted by heavy rains, compaction operations shall not be resumed until approved by the Soils Engineering firm.

ATTACHMENT NO. 4.19

Grading Observations

The controlling governmental agencies should be notified prior to commencement of any grading operations. This firm recommends that the grading operations be conducted under the observation of a Soils Engineering firm as deemed necessary. A 24 hour notice must be provided to this firm prior to the time of our initial inspection.

Observation shall include the clearing and grubbing operations to assure that all unsuitable materials have been properly removed; approve the exposed subgrade in areas to receive fill and in areas where excavation has resulted in the desired finished grade and designate areas of overexcavation; and perform field compaction tests to determine relative compaction achieved during fill placement. It is the responsibility of the owner or his representative(s) to assure that correct elevations are achieved during overexcavation procedures and at the conclusion of grading operations. Our field representative cannot determine elevations during any grading procedures.

In addition, all foundation excavations shall be observed by the Soils Engineering firm to confirm that appropriate bearing materials are present at the design grades and recommend any modifications to construct footings.

ATTACHMENT NO. 4.20

EXPANSIVE SOIL GUIDELINES

The following expansive soil guidelines are provided for your project. The intent of these guidelines is to inform you, the client, of the importance of proper design and maintenance of projects supported on expansive soils. ***You, as the owner or other interested party, should be warned that you have a duty to provide the information contained in the soil report including these guidelines to your design engineers, architects, landscapers and other design parties in order to enable them to provide a design that takes into consideration expansive soils.***

In addition, you should provide the soil report with these guidelines to any property manager, lessee, property purchaser or other interested party that will have or assume the responsibility of maintaining the development in the future.

Expansive soils are fine-grained silts and clays which are subject to swelling and contracting. The amount of this swelling and contracting is subject to the amount of fine-grained clay materials present in the soils and the amount of moisture either introduced or extracted from the soils. Expansive soils are divided into five categories ranging from "very low" to "very high". Expansion indices are assigned to each classification and are included in the laboratory testing section of this report. *If the expansion index of the soils on your site, as stated in this report, is 21 or higher, you have expansive soils.* The classifications of expansive soils are as follows:

Classification of Expansive Soil*

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
Above 130	Very High

*From Table 18A-I-B of California Building Code (1988)

When expansive soils are compacted during site grading operations, care is taken to place the materials at or slightly above optimum moisture levels and perform proper compaction operations. Any subsequent excessive wetting and/or drying of expansive soils will cause the soil materials to expand and/or contract. These actions are likely to cause distress of foundations, structures, slabs-on-grade, sidewalks and pavement over the life of the structure. ***It is therefore imperative that even after construction of improvements, the moisture contents are maintained at relatively constant levels, allowing neither excessive wetting or drying of soils.***

ATTACHMENT NO. 4.21

Evidence of excessive wetting of expansive soils may be seen in concrete slabs, both interior and exterior. Slabs may lift at construction joints producing a trip hazard or may crack from the pressure of soil expansion. Wet clays in foundation areas may result in lifting of the structure causing difficulty in the opening and closing of doors and windows, as well as cracking in exterior and interior wall surfaces. In extreme wetting of soils to depth, settlement of the structure may eventually result. Excessive wetting of soils in landscape areas adjacent to concrete or asphaltic pavement areas may also result in expansion of soils beneath pavement and resultant distress to the pavement surface.

Excessive drying of expansive soils is initially evidenced by cracking in the surface of the soils due to contraction. Settlement of structures and on-grade slabs may also eventually result along with problems in the operation of doors and windows.

Projects located in areas of expansive clay soils will be subject to more movement and "hairline" cracking of walls and slabs than similar projects situated on non-expansive sandy soils. There are, however, measures that developers and property owners may take to reduce the amount of movement over the life the development. The following guidelines are provided to assist you in both design and maintenance of projects on expansive soils:

- Drainage away from structures and pavement is essential to prevent excessive wetting of expansive soils. Grades of at least 3% should be designed and maintained to allow flow of irrigation and rain water to approved drainage devices or to the street. Any "ponding" of water adjacent to buildings, slabs and pavement after rains is evidence of poor drainage; the installation of drainage devices or regrading of the area may be required to assure proper drainage. Installation of rain gutters is also recommended to control the introduction of moisture next to buildings. Gutters should discharge into a drainage device or onto pavement which drains to roadways.

- Irrigation should be strictly controlled around building foundations, slabs and pavement and may need to be adjusted depending upon season. This control is essential to maintain a relatively uniform moisture content in the expansive soils and to prevent swelling and contracting. Over-watering adjacent to improvements may result in damage to those improvements. NorCal Engineering makes no specific recommendations regarding landscape irrigation schedules.

ATTACHMENT NO. 4.22

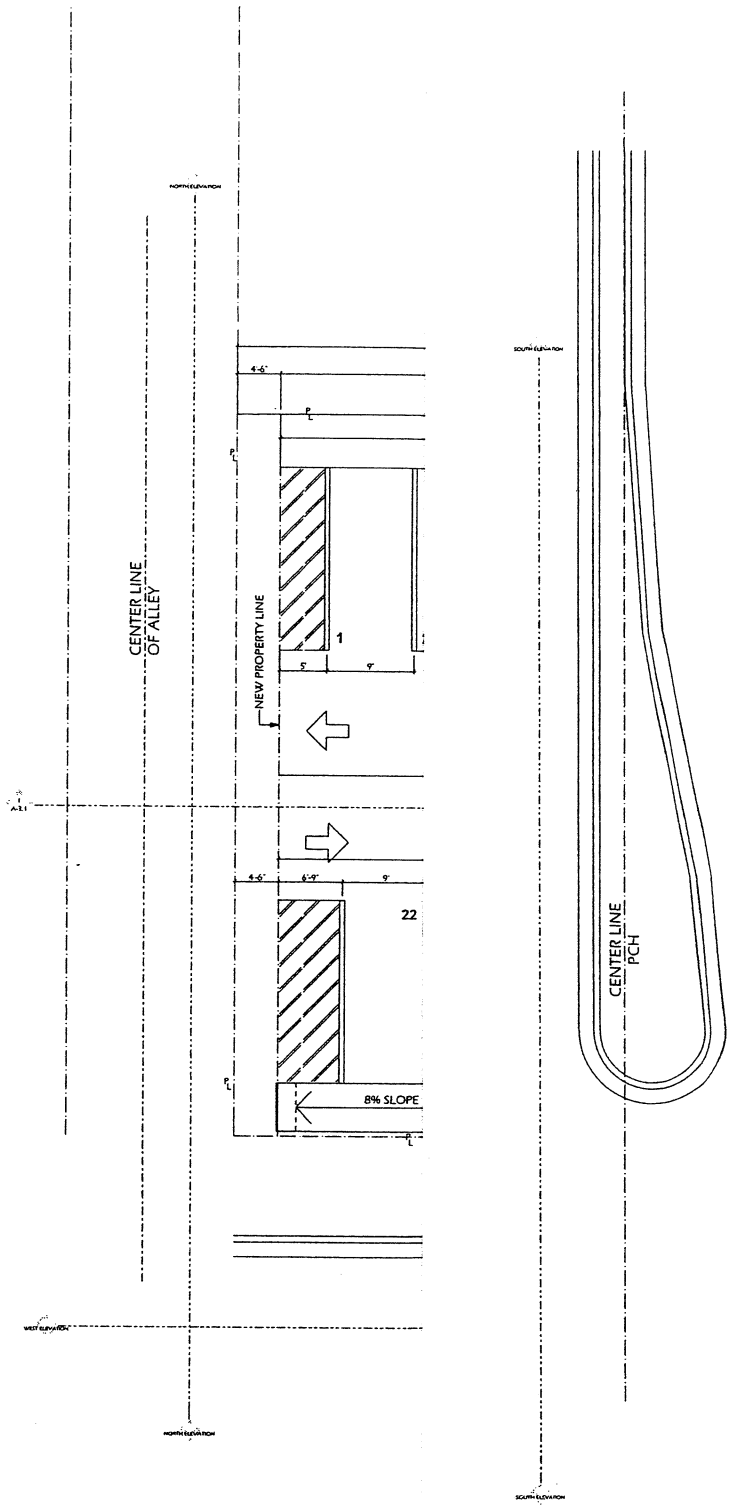
- Planting schemes for landscaping around structures and pavement should be analyzed carefully. Plants (including sod) requiring high amounts of water may result in excessive wetting of soils. Trees and large shrubs may actually extract moisture from the expansive soils, thus causing contraction of the fine-grained soils.

- Thickened edges on exterior slabs will assist in keeping excessive moisture from entering directly beneath the concrete. A six-inch thick or greater deepened edge on slabs may be considered. Underlying interior and exterior slabs with 6 to 12 inches or more of non-expansive soils and providing presaturation of the underlying clayey soils as recommended in the soil report will improve the overall performance of on-grade slabs.

- Increase the amount of steel reinforcing in concrete slabs, foundations and other structures to resist the forces of expansive soils. The precise amount of reinforcing should be determined by the appropriate design engineers and/or architects.

- Recommendations of the soil report should always be followed in the development of the project. Any recommendations regarding presaturation of the upper subgrade soils in slab areas should be performed in the field and verified by the Soil Engineer.

ATTACHMENT NO. 4.23

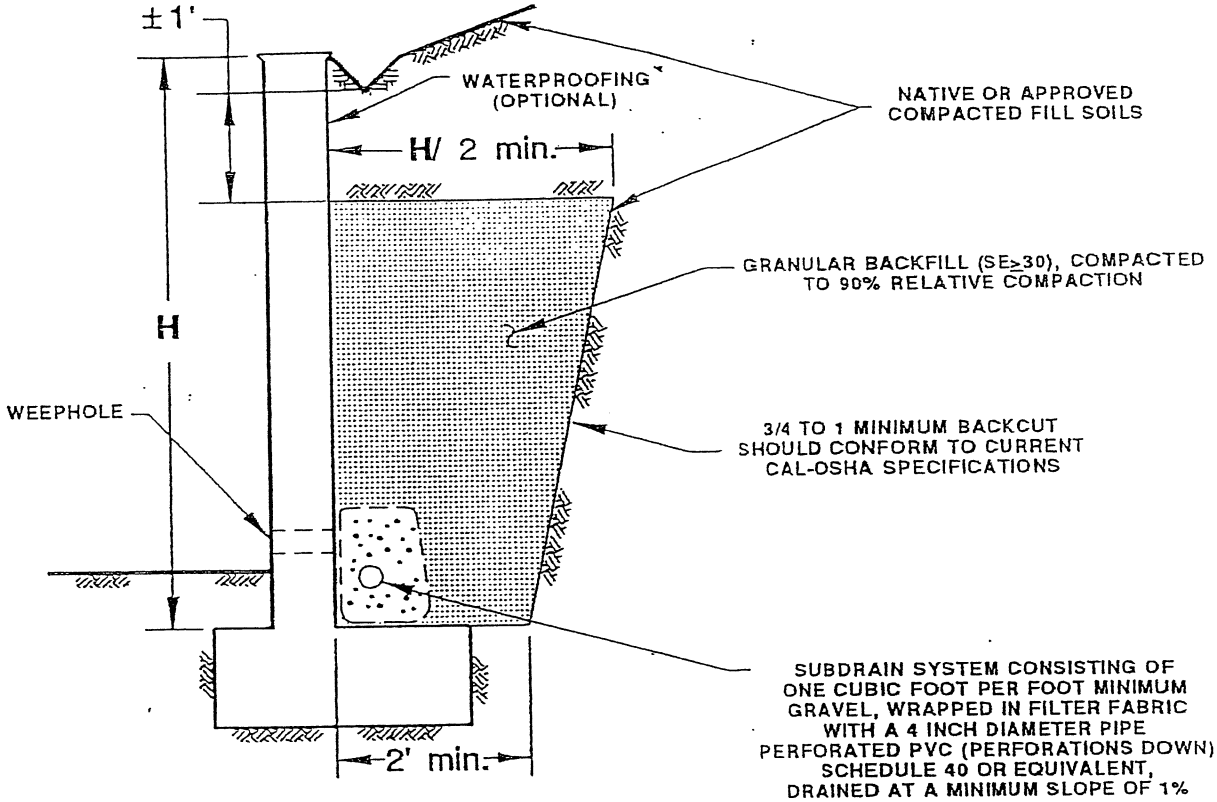


1"=20'

APPROXIMATE LOCATIONS OF BORINGS

ATTACHMENT NO. 4.24

FIGURE 1



INFORMATION DEPLICTED ON THIS DETAIL IS FOR TYPICAL CONDITIONS AND ARE SUBJECT TO CHANGE BY THE GEOTECHNICAL CONSULTANT

NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS

SCHAEFER FUNDS

PROJECT 15039-09 | DATE DEC. 2009

RETAINING WALL DETAIL

ATTACHMENT NO. 4.25

FIGURE 2

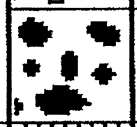
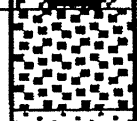
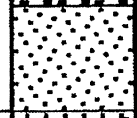
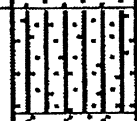
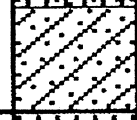
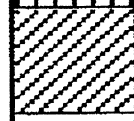
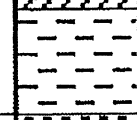
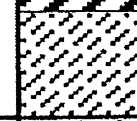
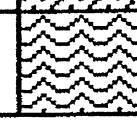
APPENDICES

(In order of appearance)

ATTACHMENT NO. 4.26

APPENDIX A

ATTACHMENT NO. 4.27

MAJOR DIVISION			GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL, SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINE (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND-SILT MIXTURES
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS — LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS — LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

UNIFIED SOIL CLASSIFICATION SYSTEM

KEY:

 Indicates 2.5-inch Inside Diameter. Ring Sample.

 Indicates 2-inch OD Split Spoon Sample (SPT).

 Indicates Shelby Tube Sample.

 Indicates No Recovery.

 Indicates SPT with 140# Hammer 30 in. Drop.

 Indicates Bulk Sample.

 Indicates Small Bag Sample.

 Indicates Non-Standard

 Indicates Core Run.

COMPONENT PROPORTIONS

DESCRIPTIVE TERMS	RANGE OF PROPORTION
Trace	1 - 5%
Few	5 - 10%
Little	10 - 20%
Some	20 - 35%
And	35 - 50%

COMPONENT DEFINITIONS

COMPONENT	SIZE RANGE
Boulders	Larger than 12 in
Cobbles	3 in to 12 in
Gravel	3 in to No 4 (4.5mm)
Coarse gravel	3 in to 3/4 in
Fine gravel	3/4 in to No 4 (4.5mm)
Sand	No. 4 (4.5mm) to No. 200 (0.074mm)
Coarse sand	No. 4 (4.5 mm) to No. 10 (2.0 mm)
Medium sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074 mm)

MOISTURE CONTENT

DRY	Absence of moisture, dusty, dry to the touch.
DAMP	Some perceptible moisture; below optimum
MOIST	No visible water; near optimum moisture content
WET	Visible free water, usually soil is below water table.

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N -VALUE

COHESIONLESS SOILS		COHESIVE SOILS		
Density	N (blows/ft)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	Very Soft	0 to 2	< 250
Loose	4 to 10	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	Very Stiff	15 to 30	2000 - 4000
		Hard	over 30	> 4000

Log of Boring B-1

Project: Schaefer / Huntington Beach	
Date of Drilling: 11/23/09	Groundwater Depth: None Encountered
Drilling Method: Hollowstem Auger	
Hammer Weight: 140 lbs	Drop: 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow Counts	Laboratory: Moisture (%)	Laboratory: Dry0.00 Density (pcf)	Laboratory: Relative Comp (%)
	Surface Elevation Not Measured						
0	4" Asphalt over 8" Gravel Base						
	FILL SOILS Silty SAND with occasional minor debris Dark brown, medium dense, moist						
	NATURAL SOILS Silty SAND Brown, medium dense, damp to moist						
5				17/20	13.9	115.5	
	Silty sandy CLAY Reddish-brown, stiff, moist Decrease in sand content with depth						
10				7/16	25.2	103.6	
15				9/21	27.5	96.5	
	Slightly silty SAND Light brown, dense, damp						
20				17/23	3.8	100.8	
25				20/30	3.9	95.1	
	Boring completed at depth of 26'						
30							
35							

SuperLog v2.2 CivilTech Software www.civiltech.com

NorCal Engineering

Project No. 15039-09

ATTACHMENT NO. 4.30

Log of Boring B-2

Project Schaefer / Huntington Beach

Date of Drilling: 11/23/09 | **Groundwater Depth:** None Encountered

Drilling Method: Hand Auger

Hammer Weight: | **Drop:**

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow Counts	Laboratory: Moisture (%)	Laboratory: Dry0.00 Density (pcf)	Laboratory: Relative Comp (%)
	Surface Elevation Not Measured						
0	FILL SOILS Silty SAND with gravel, minor debris Dark brown, medium dense, dry to damp		■		5.6	119.3	
	NATURAL SOILS Silty SAND Light brown, medium dense, damp to moist		▽ ■		11.9	116.0	
5	Silty sandy CLAY Reddish-brown, stiff, damp to moist Decrease in sand content with depth		■		12.8	120.9	
10			■		26.7	88.5	
	Boring completed at depth of 13'						
15							
20							
25							
30							
35							

SuperLog v2.2 CivilTech Software www.civiltech.com

NorCal Engineering

Project No. 15039-09

ATTACHMENT NO. 4.31

Log of Boring B-3

Project	**Schaefer / Huntington Beach**
Date of Drilling: 11/23/09	**Groundwater Depth: None Encountered**
Drilling Method: Hollowstem Auger	
Hammer Weight: 140 lbs	**Drop: 30"**

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow Counts	Laboratory: Moisture (%)	Laboratory: Dry0.00 Density (pcf)	Laboratory: Relative Comp (%)
	Surface Elevation Not Measured						
0	FILL SOILS Silty SAND with minor debris Dark brown, medium dense, damp to moist						
	NATURAL SOILS Silty SAND		■	4/5	7.6	103.9	
5	Reddish-brown, dense, moist		■	10/14	11.1	119.7	
	Silty sandy CLAY Reddish-brown, stiff, damp to moist Decrease in sand content with depth						
10			■	17/22	17.1	105.8	
	Boring completed at depth of 11'						
15							
20							
25							
30							
35							

SuperLog v2.2 CivilTech Software www.civiltech.com

NorCal Engineering

Project No.
15039-09

ATTACHMENT NO. 4.32

Log of Boring B-4

Project	**Schaefer / Huntington Beach**
Date of Drilling: 11/23/09	**Groundwater Depth: None Encountered**
Drilling Method: Hand Auger	
Hammer Weight:	**Drop:**

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow Counts	Laboratory: Moisture (%)	Laboratory: Dry0.00 Density (pcf)	Laboratory: Relative Comp (%)
	Surface Elevation Not Measured						
0	FILL SOILS Silty SAND with gravel, minor debris Brown, medium dense, dry to damp						
	NATURAL SOILS Silty SAND Brown, medium dense, damp						
5	Silty sandy CLAY Reddish-brown, stiff, moist		■	21/27	8.9	118.9	
	Boring completed at depth of 6.5'						
10							
15							
20							
25							
30							
35							

SuperLog v2.2 CivilTech Software www.civiltech.com

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Project No.
15039-09

ATTACHMENT NO. 4.33

APPENDIX B

ATTACHMENT NO. 4.34

TABLE I
MAXIMUM DENSITY TESTS
(ASTM: D-1557-07)

Sample	Classification	Optimum Moisture	Maximum Dry Density (lbs./cu.ft.)
B-2 @ 3-4'	silty SAND	10.0	127.5

TABLE II
EXPANSION INDEX TESTS
(ASTM: D-4829-07)

Sample	Classification	Expansion Index
B-1 @ 8-10'	silty, sandy CLAY	74
B-2 @ 3-4'	silty SAND	02

TABLE III
ATTERBERG LIMITS
(ASTM: D-4318-05)

Sample	Liquid Limit	Plastic Limit	Plasticity Index
B-1 @ 3-5'	15	12	3
B-1 @ 10'	49	28	21
B-1 @ 20'	18	16	2

TABLE IV
SOLUBLE SULFATE TESTS
(CT 417)

Sample	Sulfate Concentration (%)
B-2 @ 1-2'	.0072
B-2 @ 12'	.0044

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ATTACHMENT NO. 4.35

TABLE V
pH TESTS

Sample	pH
B-2 @ 1-2'	5.8

TABLE VI
RESISTIVITY TESTS
(CT 643)

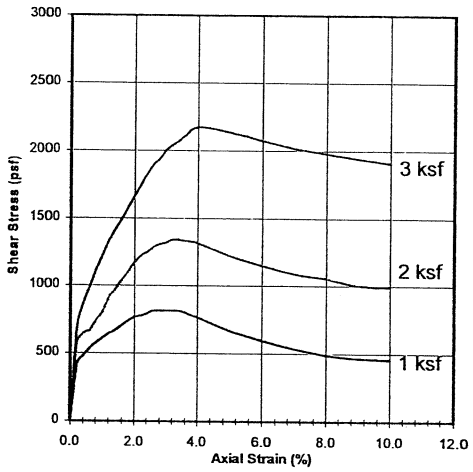
Sample	Resistivity (ohm-cm)
B-2 @ 1-2'	2,449

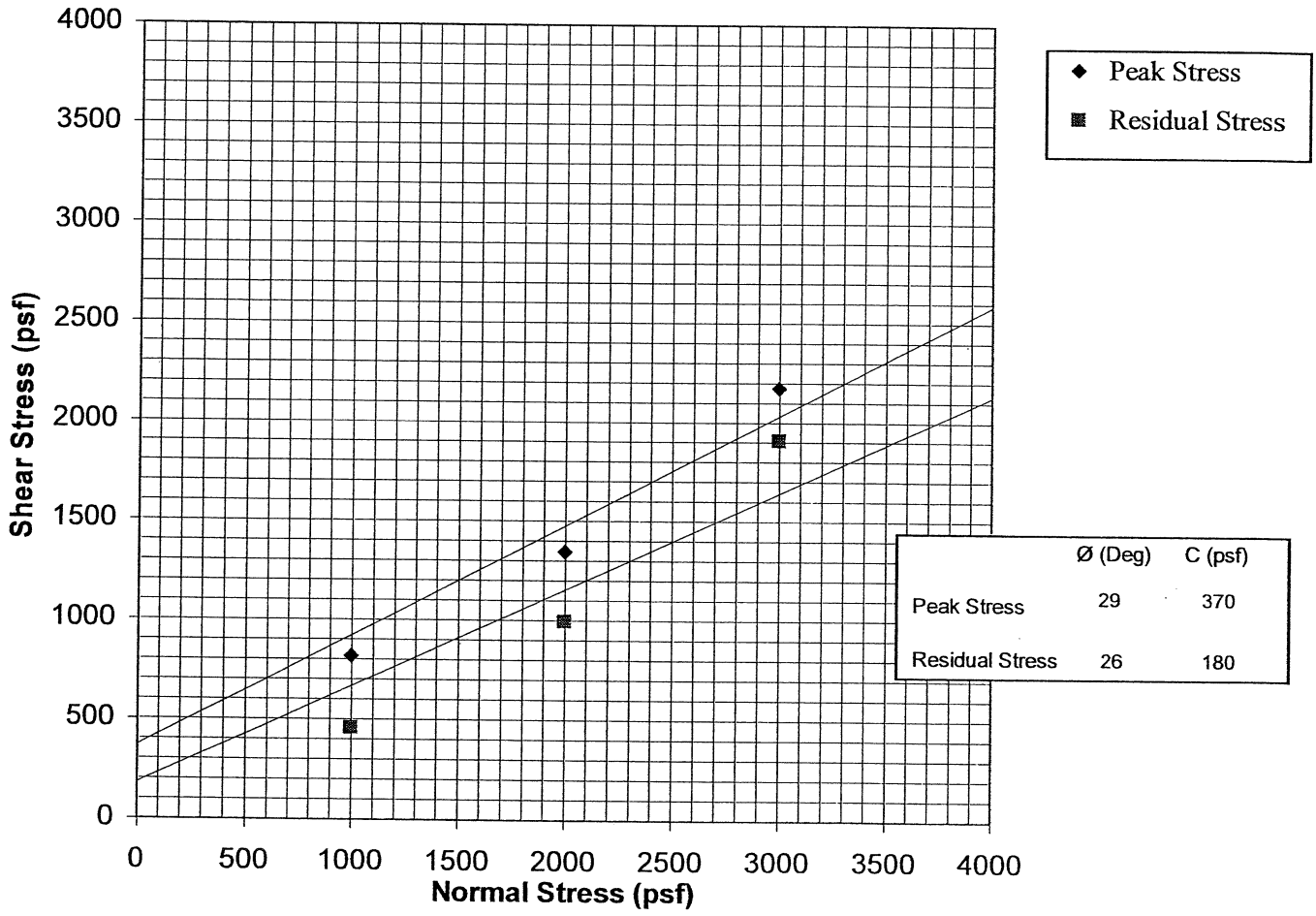
TABLE VII
CHLORIDE TESTS
(CT 422)

Sample	Concentration (ppm)
B-2 @ 1-2'	410

ATTACHMENT NO. 4.36

Sample No.		B1@15'		
Sample Type:		Undisturbed-Saturated		
Soil Description:		Silty Sandy Clay		
		1	2	3
Normal Stress	(psf)	1000	2000	3000
Peak Stress	(psf)	816	1344	2172
Displacement	(in.)	0.065	0.080	0.100
Residual Stress	(psf)	456	996	1908
Displacement	(in.)	0.250	0.250	0.250
Initial Dry Density	(pcf)	96.5	96.5	96.5
Initial Water Content	(%)	27.5	27.5	27.5
Strain Rate	(in./min.)	0.020	0.020	0.020





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SOILS AND GEOTECHNICAL CONSULTANTS

Schaefer Funds

PROJECT NUMBER: 15039-09 | DATE: 12/1/2009

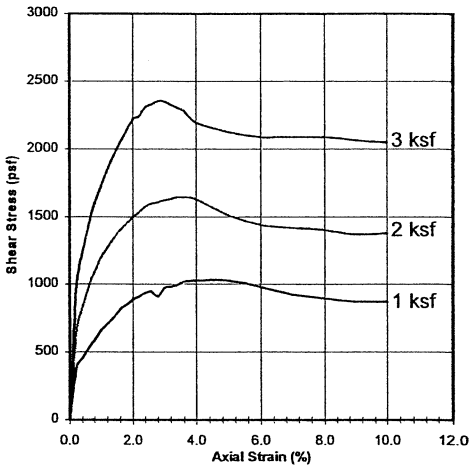
DIRECT SHEAR TEST

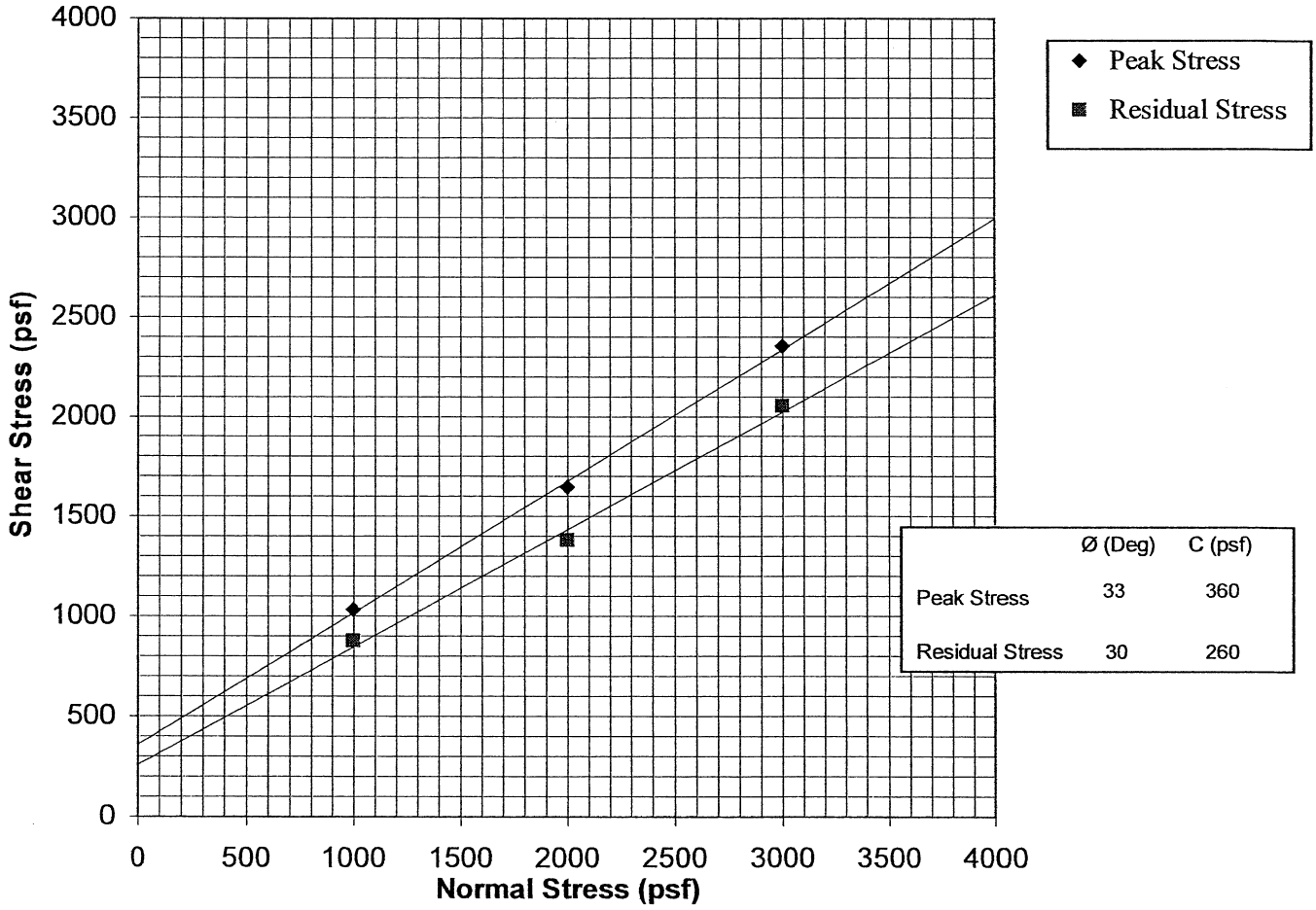
ASTM D3080

Plate A

ATTACHMENT NO. 4.37

Sample No.		B2@8'		
Sample Type:		Undisturbed-Saturated		
Soil Description:		Silty Sandy Clay		
		1	2	3
Normal Stress	(psf)	1000	2000	3000
Peak Stress	(psf)	1032	1644	2352
Displacement	(in.)	0.100	0.085	0.070
Residual Stress	(psf)	876	1380	2052
Displacement	(in.)	0.250	0.250	0.250
Initial Dry Density	(pcf)	120.9	120.9	120.9
Initial Water Content	(%)	12.8	12.8	12.8
Strain Rate	(in./min.)	0.020	0.020	0.020





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PROJECT NUMBER: 15039-09 | DATE: 12/1/2009

DIRECT SHEAR TEST

ASTM D3080

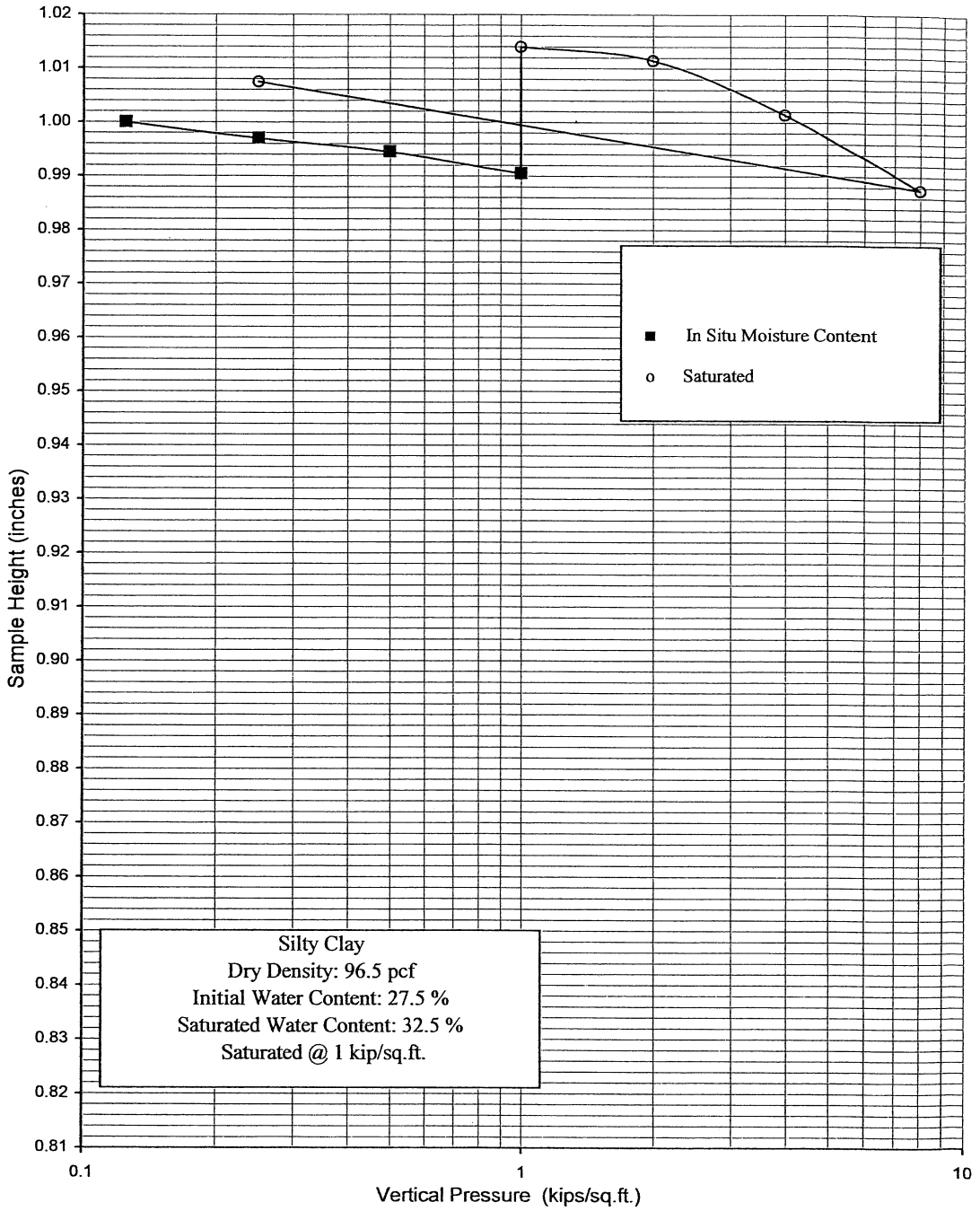
Plate B

ATTACHMENT NO. 4.38

Vertical Pressure (kips/sq.ft.)	Sample Height (inches)	Consoli-dation (percent)	Saturated
0.125	**1.0000**	**0.0**	
0.25	**0.9970**	**0.3**	
0.5	**0.9945**	**0.6**	
1	**0.9905**	**1.0**	
1	**1.0140**	**-1.4**	S
2	**1.0115**	**-1.1**	
4	**1.0015**	**-0.2**	
8	**0.9875**	**1.3**	
0.25	**1.0075**	**-0.7**	

Date Tested: **11/30/2009**
Sample No.: **B1**
Depth: **15'**

Sample No. B1	Depth 15'	Date 12/1/2009



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SOILS AND GEOTECHNICAL CONSULTANTS

Schaefer Funds

PROJECT NUMBER: 15039-09 DATE: 12/1/2009

CONSOLIDATION TEST

ASTM D2435

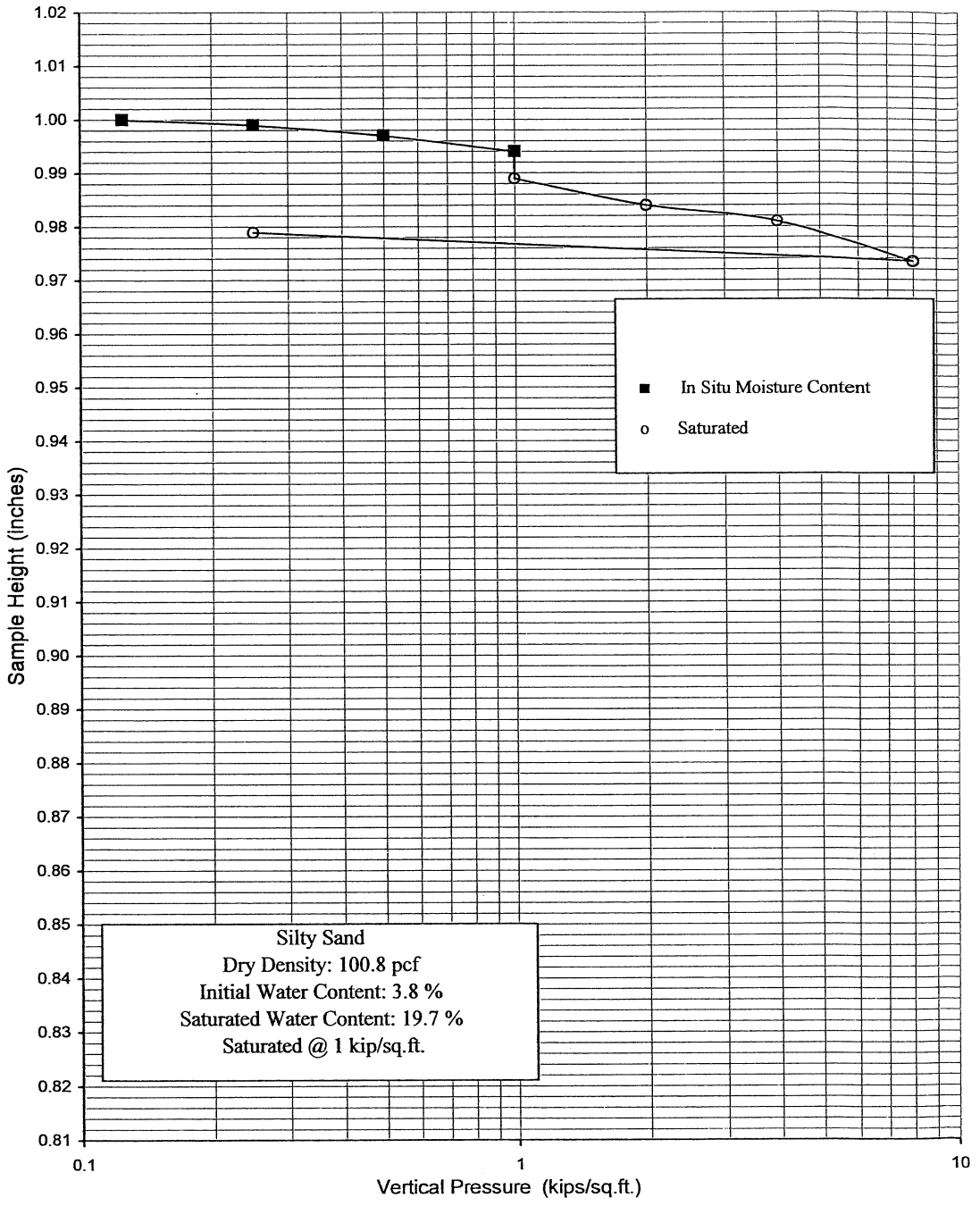
Plate C

ATTACHMENT NO. 4.39

Vertical Pressure (kips/sq.ft.)	Sample Height (inches)	Consolidation (percent)	Saturated
0.125	**1.0000**	**0.0**	
0.25	**0.9990**	**0.1**	
0.5	**0.9970**	**0.3**	
1	**0.9940**	**0.6**	
1	**0.9890**	**1.1**	S
2	**0.9840**	**1.6**	
4	**0.9810**	**1.9**	
8	**0.9735**	**2.7**	
0.25	**0.9790**	**2.1**	

Date Tested: **11/30/2009**
Sample No.: **B1**
Depth: **20'**

Sample No. B1 | Depth 20' | Date 12/1/2009



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SOILS AND GEOTECHNICAL CONSULTANTS

Schaefer Funds

PROJECT NUMBER: 15039-09 | DATE: 12/1/2009

CONSOLIDATION TEST

ASTM D2435

Plate D

ATTACHMENT NO. 4.40

ATTACHMENT NO. 5.1

Garguis Mixed-Use

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Parking Lot	9	Space
Parking Structure	14	Space
Condo/Townhouse	4	Dwelling Unit
Strip Mall	3	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics -

Land Use - The residential acreage and sq. ft. were modified from the default settings to accurately depict proposed residential component of project.

Construction Phase - The Architectural Coating phase is altered from default calendar settings to factor construction activities during holiday periods.

Off-road Equipment -

Off-road Equipment - Cement mixers and welders including in the construction phase to accomodate for the additional activities required to properly construct the mixed-use building with subterranean parking.

Off-road Equipment -

Off-road Equipment - Excavator is incorporated into the grading phase to accommodate for the trenching that will be required to construct the subterranean parking area.

Off-road Equipment -

Off-road Equipment -

Demolition -

Grading -

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - Per the California Enviornmental Protection Agency, beginning January 1, 2011, engine manufactuers are required to produce engines in 175 bhp and over category that are certified in the Interim Tier 4 level.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Mobile Commute Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2011	0.46	2.59	1.11	0.00	0.02	0.13	0.15	0.00	0.13	0.13	0.00	250.47	250.47	0.02	0.00	250.95
Total	**0.46**	**2.59**	**1.11**	**0.00**	**0.02**	**0.13**	**0.15**	**0.00**	**0.13**	**0.13**	**0.00**	**250.47**	**250.47**	**0.02**	**0.00**	**250.95**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2011	0.33	1.39	1.20	0.00	0.01	0.01	0.03	0.00	0.01	0.01	0.00	250.47	250.47	0.02	0.00	250.95
Total	**0.33**	**1.39**	**1.20**	**0.00**	**0.01**	**0.01**	**0.03**	**0.00**	**0.01**	**0.01**	**0.00**	**250.47**	**250.47**	**0.02**	**0.00**	**250.95**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.10	0.00	0.09	0.00		0.00	0.00		0.00	0.00	0.42	2.55	2.97	0.00	0.00	3.02
Energy	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	21.89	21.89	0.00	0.00	22.03
Mobile	0.35	0.39	1.56	0.00	0.20	0.01	0.21	0.00	0.01	0.02	0.00	192.43	192.43	0.01	0.00	192.66
Waste						0.00	0.00		0.00	0.00	1.01	0.00	1.01	0.06	0.00	2.27
Water						0.00	0.00		0.00	0.00	0.00	2.81	2.81	0.01	0.00	3.25
Total	**0.45**	**0.40**	**1.65**	**0.00**	**0.20**	**0.01**	**0.21**	**0.00**	**0.01**	**0.02**	**1.43**	**219.68**	**221.11**	**0.08**	**0.00**	**223.23**

ATTACHMENT NO. 5.4

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.09	0.00	0.06	0.00		0.00	0.00		0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.10
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	17.94	17.94	0.00	0.00	18.05
Mobile	0.31	0.35	1.39	0.00	0.17	0.01	0.18	0.00	0.01	0.01	0.00	164.71	164.71	0.01	0.00	164.91
Waste						0.00	0.00		0.00	0.00	0.68	0.00	0.68	0.04	0.00	1.52
Water						0.00	0.00		0.00	0.00	0.00	2.10	2.10	0.01	0.00	2.43
Total	**0.40**	**0.35**	**1.45**	**0.00**	**0.17**	**0.01**	**0.18**	**0.00**	**0.01**	**0.01**	**0.68**	**184.85**	**185.53**	**0.06**	**0.00**	**187.01**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
New Trees					3.54
Total					**3.54**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.08	0.05	0.00		0.01	0.01		0.01	0.01	0.00	6.69	6.69	0.00	0.00	6.71
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**6.69**	**6.69**	**0.00**	**0.00**	**6.71**

ATTACHMENT NO. 5.6

3.2 Demolition - 2011

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.00	0.00	0.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.86**	**0.86**	**0.00**	**0.00**	**0.86**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02	0.10	0.00		0.00	0.00		0.00	0.00	0.00	6.69	6.69	0.00	0.00	6.71
Total	**0.00**	**0.02**	**0.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.69**	**6.69**	**0.00**	**0.00**	**6.71**